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A NEW
THEORY
OF
PHYSICK
AND
DISEASES,

Founded on the

Principles of the NEWTONIAN
Philosophy.

By NICHOLAS ROBINSON, M.D.

Medicina omnium Artium præclarissima est; verum propter Ignorantiam eorum qui eam exercent, & ob Vulgi Ruditatem, quod tales pro Medicis judicat, & habet: jam ed res devenit, ut omnium Artium longè vilissima censeatur. *Hippoc. Lex.*
At eorum aliquid, qua nondum inventa sunt, invenire; quodque inventisse, quam non inventisse præstiterit; similiterque imperfecta ad finem deducere: id mihi videtur illius esse munus, qui intelligens existimari expedit. *Hipp. lib. de Arte.*

L O N D O N:

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To the Learned

Doctor M E A D,

*Fellow of the College of Physicians,
and of the Royal Society.*

HONOUR'D SIR,

AS the profess'd Design of
the following Treatise is
to emprove the Noble Sci-
ence of PHYSICK, to
whom could I more aptly apply for
Protection, than to a Gentleman of
your consummate Learning and Ex-
perience ?

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I MUST

I M U S T confess, Sir, had I not already receiv'd some Instances of your Favour, I should have been afraid of submitting a Treatise of this Importance to your Perusal; for you are so perfectly Master of all the Parts of the Noble Art of P H Y - S I C K, that it's impossible the least Failure should escape your Notice.

N O R is your Knowledge in the Profession, the only great Character you have had to recommend you to the general Esteem of the World; but there is a certain Dignity in your Person, a natural Humanity, emprov'd by the politer Arts, that gives your leading Name the Ascendant over all you are pleas'd, at any Time, to oblige with the Pleasure of your Conversation.

N O N E, therefore, but a Person of your finish'd Character, could be a
proper

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proper Patron for a Book, that aims at reducing Physick to a Standard, and of setting Laws and Boundaries to the State of Health and Diseases.

ACCEPT then, Great Sir, the sincere, tho' weak Endeavours of my early Labours. The Honour of your Approbation will secure them from Censure; and however defective they may appear in some Particulars; yet I hope, that, by this Essay, I may excite others to attempt greater and nobler Discoveries.

NOT that, by this Address, I would be suppos'd to add any Lustre to your Character: No, Sir; those eminent Qualities that have distinguish'd you in the Learned World, can no more be hidden than they can be exceeded; and that happy Success attending your great Practice has exalted you to the Summit of a Profes-

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sion, that, in all Ages, has receiv'd the highest Honours.

I NEED not take Notice of the Divine *Hippocrates*, and the Favours conferr'd upon him by the Senate and People of *Athens*: The *Romans* follow'd their Example, and erected a Statue to the Memory of *Antonius Musa*, for raising the Emperor *Augustus* from a Disease, that, by the general Suffrage of all his Physicians, was judg'd incurable.

AND, at this Day, the College of Physicians at *Milan* are establish'd, SACRI PALATII ET AULÆ LATERANENSIS COMITES AURATÆQUE MILITIÆ EQUITES, and wear Chains of Gold, as a Mark of Distinction, in Honour of the Profession.

THESE particular Honours, Sir, I
the rather take Notice of, because they
were

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were conferr'd on the Professors, when these several States were in their full Meridian of Glory ; and neither the *Grecians*, nor *Romans*, were generally liberal of their Favours, but to those that had greatly merited of the Commonwealth.

INDULGE me one Moment, while I take Notice of that most sage Advice, you are pleas'd to recommend in your excellent Treatise upon Poisons ; because I have endeavour'd to make it the Standard of my Reasoning, in exploring the following Subjects ; * “ That it is much more “ easy to spin out a false *Hypothesis* “ into precarious Reasonings, than “ to make faithful Experiments, and “ fairly emprove 'em by just and “ necessary Consequences.” This is a Thought truly becoming so great

* *Essay upon the Viper*, p. 11.

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a Genius, and which, if well en-
prov'd, had, by this Time, remov'd
much of that Darkness and Obscur-
ity, that, at this Day, attends Medi-
cinal Enquiries.

PERMIT me, Honour'd Sir, in
the most obliging Manner to return
you my most grateful Acknowledg-
ments for this particular Favour,
which I receive with the greater Satis-
faction, as it, at the same time, exalts
me to the Honour of subscribing
myself,

*Your most Obliged
and most Obedient
Humble Servant,*

N. ROBINSON.



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HEY that have undertaken to write upon the Subject of Physick, and the great Changes brought about, in Human Bodies, by Diseases, have not accurately enough attended to the Nature and Qualities of those Instruments by which those Alterations are effected.

TO this Neglect, I think, is owing that little Improvement we have made in this most Excellent Art, so far surpassing all others, as the invaluable Blessing of Health gives way to all other valuable Considerations.

I HAVE, therefore, endeavour'd to unravel the Mysteries of Nature, and account for the Phænomena of Health and Diseases, from the Mechanism of the Parts, and the most evident Laws of Nature, improv'd by Experiments; and as in founding this System I have entertain'd no Principles but those inherent in the Constitution, so, I persuade myself, it must be of some Service to the Commonwealth of Physick, as I have endeavour'd steadily

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steadily to pursue Nature, and admit of no Deductions, but what are consonant to her Principles.

THE Balance of Nature, or the Standard of Health, are Words I have frequently us'd in the following Treatise; and here I am desirous to explain what I mean by those Terms; and, as they are Words of a synonymous Signification, I intend them only to express the highest Perfection of Health, or when the Solids and Fluids are so exactly balanc'd, that they answer to each other's Motions without the least Resistance, and, of Consequence, without giving the least Disturbance to the Animal Economy.

FROM the several Degrees of their Elevation or Depression above or beneath this Standard, I have endeavour'd to account for the several Degrees of Diseases, and their different Natures. Now contrarily some may think, I had better answer'd the Purpose, if I had made use of the several Motions of the Fluids intended or remitted, that is, being swifter or slower; but those Words, to me, did not seem expressive enough of all I intended; for the Blood, in all Acute Diseases, is not only swifter, but also more divided, and in greater Quantities; so that I could find no Word so proper to express all those separate Ideas, as by saying the Solids are elevated above the Balance of Nature, and, of Consequence, that the Motion, Division, and Quantity of the Fluids are increas'd. On the contrary, while the Body labours under Chronic Diseases, the Motion, Division, or Fluidity and Quantity of the Blood are all decreas'd; and these several Ideas I express by saying, the Solids are depress'd beneath their natural Balance. But if any think other Words more aptly fitted to express these different Motions, they have

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have my full Consent to use 'em, so they give us a clear Explication of their Meaning.

THE R E is another Term I have us'd in the following Theory, and that is, the Law of Attraction; and I have often thought all the several Principles of Philosophy might be comprehended under the two distinct Terms of Attraction and Repulsion; for, by the Word Attraction, I can entertain a clear Idea of the Unity, Solidity, Denseness, Bulk, Breadth, and Thickness of any Parcel of Matter; and by the opposite Term, Repulsion, I acquire a very clear Idea of the Motion, Division, Fluidity, Rarity, and Change of the Figure of Matter; which, well improv'd, might raise such a System of Rational Philosophy, as might stand the Test of Ages.

I M U S T confess, it is a sad and melancholy Consideration, that this noble Profession of Physick should always be esteem'd a conjectural Art, when the Principles, upon which it is founded, are the same that give Being and Subsistence to all other Arts. Is not the Mechanism of the Body conducted by the same Laws that support the Motions of the greater Orbs of the Universe? and are not all the Changes and Variations it suffers in Diseases, to be resolv'd from an Alteration of its Matter and Motion? How then comes this Noble Art to be conjectural? how comes the Practice to be esteem'd precarious, when the Theory is supported upon Principles the most evident and certain?

T H E following Treatise, therefore, was written with an Intention to discover the Certainty of Theory, and the Advantages to be reap'd from it in point of Practice. How far the learned World will allow it to be new, I know not; but of this I can assure the Reader, that both the Manner of treating Health and Diseases, and several of the Ob-

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servations I have made in the Animal Economy, were entirely new to myself; nor could I meet with any Satisfaction upon these Points, from any of those Authors, that professedly had treated upon those Subjects.

NOT that I pretend to offer this to the World as a finisht Piece; I am too conscious of my own Weakness and Incapacity to attempt such an Undertaking; I only publish it as an Essay towards reducing Physick to a Standard, by erecting the Basis upon Principles that can never fail us; for Diseases have always their Causes constantly certain; and it's impossible to conceive, how a Body under the Circumstances of Health, should fall into a Disease without certain predisposing Causes to procure it; and Causes will always have the same certain Effects in producing Phænomena's; that is, the Diagnosticks of Diseases will appear regular while the Causes are equal; but, from irregular Causes, we often see Diseases attended with direful Aspects; which different Appearances have given Occasion to all that Confusion generally attending those, that have written upon Physical Subjects.

I HOPE, the candid Reader will pass over those Defects he may, in the following Pages, find liable to Exception; since the Greatness of the Scope I have taken would not permit me to be exact in clearing up every Particular; however, I hope those Defects of mine may have that Influence, as to provoke some abler Genius to give us his better Thoughts upon those Subjects, that I confess only to have hinted upon, and which, I am sure, it is highly reasonable they were clear'd up.

WE are told, indeed, by Dr. Cockburn, that no Disease has yet been successfully explain'd, besides what he has done upon the Gonorrhœa and Fluxes;

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Fluxes; and in his Preface to *Præsagium Medicum* he rejects all other Authors, and endeavours to set up himself as the Publick Dictator to the Commonwealth of Physick.

I N his Treatise of Fluxes, Pag. 94. he tells us, that “ nothing but Fancy, Wrangle, and Content are left to conduct us in the Cure of Diseases, and that no Physician understands the Nature and Cause of a simple Flux, nor how to give any Rational Account of its Cure. This Reproach he endeavours to charge upon the whole Faculty.

I N Page 128*, he reflects upon Dr. Ratcliff in very unbecoming Terms; for however that Gentleman might be liable to Exception in his Personal Conduct, yet all the World must acknowledge this important Truth, that he supported the Character of a great Physician to his dying Day; and to say otherwise, would be to arrest the Judgment of all Mankind, who generally esteem'd him, not only the greatest, but the most successful Practitioner in this great City, and was most commonly call'd in as a forlorn Hope, when all other Advice had fail'd, and none could help the Miserable.

B U T he does not only affront the Characters of private Gentlemen, but, in Page 129, reflects upon the College for receiving the *Confectio Fracastor. sine Melle* into the late Edition of their *Dispensatory*, and saith, “ It deservedly surprised every Physician, that this Deformity of a Composition was thrust into the late London Dispensatory;” when, at the same time, every great and good Physician was consulted upon its Reception, and advis'd it as of real Advantage

* *Treatise of Fluxes.*

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to Mankind: He might know, that no Alteration could be made in any Medicine without the Concurrence of the President, Censors, and Fellows. And tho' he avers, that no Physician understands the Cure of a Flux besides himself, yet, in Page 161, he professes he gave his Specific Electuary, he boasts such Wonders of, on Wednesday, which cur'd the Patient by Saturday, tho' he had the Misfortune to die the next Day; contrary to Hippocrates, who clearly demonstrates, that * Medicinam esse Morbos in totum tollere, and consequently, we must not only abate the Violence of the Disease, but the Danger also, or, I think, it can upon no good Grounds be properly call'd a Cure. Sad Fate of the Patient, when the Cure proves not the Death of the Disease, but of the Patient! But far be it from me, to make Use of any unwary Concessions of the Doctor's to his Prejudice, if, at the same time, through all that Case, he had said any thing that might make 'em seem unwary.

I ONLY take Notice of this Passage, to let that Gentleman see he is not infallible, and that, as we are all liable to Failures and Mistakes, so we should endeavour to bear with each other, and not cavil at any little Errors we meet with in Books design'd for the publick Good, if at the same time they appear design'd for the publick Good. But when we conceal some Favourite Medicine, and upon all Occasions extoll it with the biggest Panegyricks, there is shrewd Suspicion, we design not so much the Publick, as our own private Good and Advantage.

BUT the Doctor's Knowledge of the Nature and Cause of Fluxes is not the only Point wherein

* Lib. de Arte.

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he is defective; but he also extremely mistakes the Operation of both Vomiting and Purging Medicines, and is all out in determining the Doses of both.

HE grounds the first Part of his Solution of the Problem, in the latter End of his Treatise of Fluxes, upon a Supposition entirely false in Fact, viz. "That Vomiting and Purging Medicines never perform their Operation, before they get into the Blood, and mix with the Mass :" For I have clearly prov'd in the following Treatise, that both the one and the other act according to the Strength of the Fibres, and Thickness of the Vascular Tunics, not the Quantity of Blood ; and as the Fibres of the Stomach and Intestines are stronger or weaker, so a greater or lesser Quantity of a stimulating Medicine is necessary to excite Vomiting or Purging ; and it is notorious to every one's Observation, that when an Emetic falls into the Intestines it turns Purgative ; and if it get into the Blood, it goes off by Sweat, Urine, or insensible Perspiration, without any evident Effects at all.

I AM sorry I have lengthen'd out this Preface in taking Notice of the Mistakes of this Gentleman, which I should not have done, had he not been so positive, as almost to deliver his Positions as unerring Oracles.

THE great Hippocrates tells us, † that ignorant Pretenders to Physick are not discoverable in trivial and slight Indispositions, and draws the Parallel between a bad Pilot and ignorant Physician in a very beautiful Manner. A very sorry Pilot, as he there goes on, knows how to steer a Ship in calm Weather, and while the Seas are clear of Danger ; but when Winds blow, the Seas

† Lib. de Prisca Medicina.

roar,

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roar, and Rocks or Sands are near, the Ignorance of the Pilot is then notoriously betray'd to all the Crew, and Peoples Lives, through his Insufficiency to direct the Ship, are expos'd to imminent Hazard; so, in Physick, a superficial Knowledge, may qualify a Person to cure a Flux or slight Indisposition that perhaps might go off of themselves; but the true Test of a legal Physician is then only discover'd, in great, vehement, and dangerous Cases, when the Disease is Epidemical, and attended with all the Rage and Fury of distracting Symptoms.

I HAVE nothing more to recommend to the Reader, but that he would read without Partiality, judge without Prejudice, and try the Success of a Practice drawn from the following Theory; for that is the Period that must crown all our Labours.

WOOD-STREET,
Sept. 4. 1724.



A N E W,



A NEW
THEORY
OF
PHYSICK
AND
DISEASES.

PART I.

CHAP. I.

*Of the Grounds and Hindrances that
hitherto have obstructed Medicinal
Enquiries.*



AM very well apprized of the Danger I run, in attempting to write upon a *New Theory of Diseases*, when so many learned Men of the Profession have already miscarried upon this very Subject. But the only Reason I shall offer, in Defence of this Undertaking, is, the little Satisfaction I could meet with, from any of those Authors

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that, professedly, had writ upon the Theory of Diseases.

IT is Matter of Surprize to myself, (and I believe to a great many others) when I seriously reflect on the little Progress this most noble Science has made, in that vast Flux of Ages, from the Divine *Hippocrates* down to our present Times; and, if we search into the Grounds of those Letts and Impediments, that hitherto have obstructed the Progres of Medicine, I fear we shall be obliged to charge 'em, in a great measure, to our too zealous espousing the Authority of the Ancients, and receiving their Dictates and Maxims as the standing Laws of the Profession.

A DESIRE therefore to break the Chains that had so long fetter'd Men's Minds, was none of the least Reasons that prevailed on me to attempt the following Treatise; and I persuade myself, that the Method I have taken in handling this Subject, being conformable to the Laws and Mechanism of the Body, is the only certain Way we can take to arrive at a regular and safe Practice. However, if this System of Physick and Diseases should happen to prove but a Castle in the Air (a Fate not uncommon to much greater Writers) I have taken all possible Care, that the whole Building should appear all of a Piece, and hang together without the Assistance of either Buttresses or Props to support it. Not that I would be supposed to cast the least envious Reflection on those Fathers of ancient Learning that were so highly reverenced through all Antiquity; yet, after all, the greatest Reverence is due to Truth, and, I believe, it will be granted me, that we should,

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should, by this Time, have made much greater Improvements in Medicine, had we followed the Example of our great Master *Hippocrates*, and trac'd out the Nature and Cause of Diseases ourselves, and not so much leaned on the Authority of others.

THE much reading other Men's Works, often tinges our Brains with their Errors, and makes us never a whit the wiser or more knowing. What, in *them*, was Wisdom and Science, in *us*, is only Opinion and Bigotry, if we too zealously attach their Notions, and do not, as they did, employ our own Reason in the Knowledge of those things that raised their Reputation in the World, and so much endear'd them to Mankind, that Posterity would sooner question their own Senses, than dispute a Maxim of *Aristotle*, though never so contrary to Reason and Experience.

THIS Passion, this Blindness for the Honour of great Names, and not judging for ourselves, is preposterous, and none of the least Causes of that Darkness and Obscurity, which, at this day, attends Medicinal Enquiries.

AUTHORITY, I must confess, is a strong Motive to encline the Will; yet of all Arguments is it the weakest in the World to convince the Understanding, if it hath no other evident Grounds to support it.

AUTHORS, tho' highly venerable for their great Characters, we should consider not as infallible Guides, but as Men form'd of the same Materials, led and misled by the same Passions, and, of consequence, subject to the same Prepossessions and Failures with ourselves.

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INDEED, the Principles of all Arts and Sciences ought to be with the nicest Care, and clearest Judgment explain'd, before we embrace 'em ; for an Opinion can never be demonstrated true, from either the Authority or Number of its Followers, unless, by a judicious Examination, it was proved so from the Beginning ; and he that delivers nothing for Truth, but what he has attested from Experiments, is of more Weight with me than ten thousand of the vulgar Writers, who follow one another like a Flock of Sheep, and wholly rely on the Authority of others, for what they deliver.

IN the ensuing Discourse I have neither confined myself to the Authority of the Ancients, nor Discoveries of the Moderns ; but have equally used either, as they seem'd best to answer the real Service of Physick.

TRUTH has been my only Aim in these important Enquiries, and wherever *that* seem'd to lead me, there my Thoughts have most impartially followed, without the least Tincture of Bias to misguide me.

THUS much I could not but think proper, in the Beginning of this Treatise, that the Reader may be appriz'd of the little Regard I desire him to pay these Writings, if he perceives them not to correspond with the Nature of those Things they treat of.

CHAP.

C H A P. II.

Of the general Laws of Matter.

THE great and stupendous Author of Nature, in the Beginning, created one Matter, of which, differently modified, he form'd all that Variety of Beings we perceive in Nature, all that Diversity of Creatures that adorn the Creation ; and, from a few simple and uncompounded Principles effected all those different Appearances, Mutations, and Changes, that Bodies suffer in this visible System of the Universe : So that, upon a due Reflection, we shall have the greatest Reason to believe, that this spacious Theater, with all its glorious Inhabitants, was not the Effect of Chance, or a fortuitous Hit of Atoms dancing in the infinite Inane, and casually falling into this regular Order, but the deliberate Contrivance of infinite Wisdom, whereby all things were established according to the nicest Rules of Number, Weight, and Measure.

A PHYSICIAN, therefore, if he would arrive at any Certainty in his Profession, should understand the general Laws of Matter, its Extension, Figure, and Motion, its Gravitation, Attraction, and Repulsion, as also its Density and Division ; and in these, and the like Enquiries, he ought to read a few, and those the best Authors, both ancient and modern ; still remembering, that the only way to arrive at any tolerable Proficiency in Science is, to preserve the Mind

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free and untainted with those Opinions that are imaginary, and quadrat not with Truth and the Nature of Things.

OF this I can assure the Reader, that in perusing the following Pages, he will find no Theories asserted, that are not grounded upon Experience, supported with the most evident Matters of Fact; and I would not receive the Law of Attraction, or the Gravitation of Matter, as a natural Principle resulting from the inherent Laws of Nature, first discover'd by that Ornament of the English Nation, Sir ISAAC NEWTON, till, with the utmost Care, Diligence, and Application, I had enquir'd into the Properties and Tendencies of Matter, and perceiv'd it impossible rightly to explain any natural Phænomenon concerning the Descent of Bodies, without admitting that Principle as a *Dæm*.

WHEN we consider, that the Matter of this Globe is in a continual Flux, and all its Creatures perpetually changing their Figure and Motion, we are at a Loss to know what should preserve it so compactedly together, considering the vast annual, progressive Motion it makes round the Body of the Sun, as well as the Diurnal Motion it turns on its own Axis; for, to say the circumambient Atmosphere, on every side strongly embracing it, preserves its Texture from flying off its Center, solves not the Difficulty; for then the Question recurs, *What supports the Atmosphere?* whereby, if we admit an Infinity of Spaces, we shall also be oblig'd to admit an Infinity of Matter, than which, there cannot be a greater Absurdity.

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THIS Connexion of the Particles of Matter, therefore, so compactedly adhering with one another, can only be resolved into this Principle of Attraction, which gives a Power to its centripetal Force, to overcome the Resistance of the centrifugal, and without which Power this Globe of ours would spirtle into ten thousand Millions of Pieces: So that this Principle of Attraction, being the most simple Law of Matter, is diffus'd thro' all that Mass that exists in the Creation, whether in the Vegetable, Animal, or Mineral Kingdom; and it consists in uniting of Particles by Contact, and is that inherent Principle that preserves any Bulk or Quantity of Matter from falling to Pieces.

EVERY Parcel of Matter is more or less solid, as the Sum of all its Attractions are more or less cohering; that is, as its Particles touch each other at more or fewer Points, which Cohesions very much depend upon their either being Squares, or approaching nearest that Position and Figure.

FROM this most simple Principle of Attraction or Cohesion, arise Extension, Figure and Motion, the inseparable Properties of Matter. The Superficies is the extreme Boundaries, and Figure that Form it puts on under all the Divisions it suffers in Nature. But to enlarge on these several Points, would only be a repeating of what I shall more largely insist upon, when I come to treat of the Laws and Properties of those Materials that compose a human Body.

Now if we allow this Principle of Attraction, and the Laws consequent thereupon, in carrying on the Operations of the greater

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World, I can see no Reason why we should not establish the same Laws in explaining the Motions and Changes in the lesser. If there be not some Analogy, Consent, and Agreement between the Frame and Structure of the greater World, and Mechanism of this lesser, why is the Comparison so often made?

We study Philosophy for no other End, as I know of, but, that, being acquainted with the Laws and Motions of the greater System, we might get a better Knowledge of the Properties and Actions of the lesser, and make the Application with greater Certainty. But if the Gravitation of Matter in those two different Bulks be different; if the Laws, Properties, the Figure and Motion vary, to what End is our Study of the Qualities of Bodies? why do we not shorten our Enquiries, and limit 'em to Disquisitions concerning the Operations of Nature in the Body of Man, the only proper Object of a Physician's Enquiry? but, that we conclude from all the visible Appearances, that the greater World contains several Phænomena's, the clearly explicating of which will more naturally lead us to explain the Constitution, Make, and Mysteries of the other.

THUS far we have discover'd, that this whole World of Beings, the Natures, Properties, Accidents, and Affections of Bodies are all distributed under proper Classes, as compatible or consistent with one another, and that the whole Bulk is fastly cemented by this Principle of Attraction. These Bodies of ours, therefore, partaking of the same Nature, must also be subject to the same Laws, by which the greater World

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World is govern'd; and of consequence Natural Philosophy, which unravels the Mysteries of Nature, is of absolute Necessity in the forming a skilful Physician: But then the great Difficulty is rightly to apply those Laws to the particular Systems of our Bodies, and their different Constitutions; to endeavour all which is the principal Intent of this Treatise.

C H A P. III.

Of the general Frame and Constitution of Human Bodies.



UT before we can with any Certainty treat of Diseases, their various Causes, Degrees, Effects, and different Manner of Cure; we must in the first place endeavour to get a right Knowledge of the Body, and the Frame and Make of the Constitution, and know of what Matter it consists, the Laws, Properties, and Motions it is endu'd with, upon what Springs they turn, and how imprest'd upon all the Parts.

THESE Enquiries open'd to my View a very large Scene, and discover'd some Difficulties I perceiv'd would not be easily overcome; for besides the Beginning of Life and Motion in Bodies, the Structure, Fraime, and Symmetry of the Parts, the Motion of the Fluids, and their Dependence upon the former, were Matters that would often occur in my way.

and



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and demand a particular Attention in solving some Difficulties not easy to account for. They, therefore, that have writ upon the Subject of Anatomy, seem not, in my Opinion, to have favour'd very much the Improvement of Physick as a Science, while they applied the Main of their Labours to a Disquisition upon the Solids only: A little Reflection would have inform'd those Gentlemen, that a right Mixture and Motion of the Fluids, were as necessary to the Well-being of the Body, as the Structure and Consent of the Solids; and that it is only from the mutual Consent, Agreement, and Motion of those two distinct Masses of Matter, that Life itself is preserv'd, and what we call Nature takes her Original.

Now if we spare ourselves a little Pains, and take a View of this wonderful Contrivance of Nature, form'd with such exquisite Art, fitted so admirably with Instruments for attaining the great Ends of Life, we shall be oblig'd to confess, that Nature abounds with Mysteries above the highest Flights of the Understanding to conceive; for who, from the Texture of the Parts, can account for the Juncture of Matter and Thought, and by what a wonderful Mechanism it is, that, at the Command of the Will, all the several Parts of the Body should obey the Laws of Motion? However, I entreat Leave to digress a little, and contemplate the Dignity of this noble Animal, before I take him to pieces, and range thro' all the Materials that compose his Mechanism.

By a most clear Reflection, we perceive this Godlike Creature to consist of two Parts, *Matter and Thought, or Soul and Body,* evidently distinct

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distinct in all their Operations, though both subsisting under the same Form, and jointly constituting the Essence that denominates him a Rational Creature. The Mind can reason, *The different Operations resulting from the Mind and Body united.* think, and act without any Assistance from the Body; nor can we conceive how the finest Fibres, the purest Blood, or most exalted Spirits, can ever inspire those Bodies of ours with Thought, Reason, and Reflection; they are *ted.* foreign to a Capacity of Thinking, and, as Matter, though subtiliz'd to the highest Degree of Spirituality by all the Processes of Nature, yet is it as distant from Thought, as the very Bones that support the Machine. Again; Can the Mind stop the Circulation of the Blood, retard the Beating of the Pulse, or obstruct the Motion of the Spirits, although Natural to Matter and Motion? Once more; the Mind contrives, forms, and intends that or this, just as it pleases, without any Information from the Body, and drags those heavy Carcasses, in Obedience to the Will's Direction, without the least Assistance from those passive Machines. Lastly; The Body hungers, thirsts, and digests without any exerted Thought of the Mind to command those Operations; and wears out, pines, and dies, not only against, but in Opposition to the Inclinations and Desires of the Mind.

THESE distinct Operations we clearly perceive to result from Matter and Thought united; but by what wonderful Mechanism it is, that this System is supported, how the Cement is so firmly rivetted and the Junc-ture preserv'd, I must confess, to me appears above the highest Stretch of human Fancy to conceive;

But no Possibility of conceiving the Mechanism of their Union.

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conceive; only of this we may be certain, that the Actions of our Minds are in a great Measure depending upon the Mechanism of the Body; and this we perceive from the Operations of the Passions, which, I am inclinable to believe, are the *Medium* that conjoins Matter and Thought.

WHAT SO EVER, therefore, affects either the Mind or Body, will raise or depress the Passions, just as the Object is more or less agreeable; and thus we perceive that all Pain continuing long, and having immediate Contact with the Body, creates Grief of Mind and deep Melancholy; and all great Losses and Disappointments raise the same Passions, though they have no Commerce with the Texture of the Body, but only by the Mind's working upon the Passions; so that our Thoughts or Conceptions of Things are more or less distinct, as the Passions are more or less calm, as the Animal Spirits are more or less regular, as the Nervous Fibres, their proper Conduits, are more or less acceding to the just Balance of Nature; whose Welfare, as we shall hereafter observe, is depending upon the Contraction of the Heart, and vibratory Motion of the Arteries.

Now although Thinking, by its own Power of Reflection, may begin of itself, yet, by the Chain of those Consequences, it evidently appears to terminate in the Fibre; and the Perception of Pleasure and Pain, and all their several Degrees, may begin in the Fibre, and end in the Imagination, which more or less affects the Body, as the Parts where they happen are more or less nervous, as the Matter, with which those Sensations are struck, is more or less agreeable or displeasing.

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IN this Scale of Motions, both ways ascending and descending, we perceive a Connexion of Cause and Effect, which begins in gross, palpable Matter, and terminates in the Understanding, the highest Faculty of the Soul, and *vice versa.*

So that I may safely venture to lay it down as a *Postulatum*, that *Thought can move Matter, so predispos'd by the Divine Power, as to be influenc'd by the Direction of the Will;* but what Kind of Mechanism, or Arangement of Particles, is necessary to make up a System of Matter to be directed by Thought, or the Influence of the Will, is a Question, I must confess, that again puzzles my Philosophy, and can only be resolv'd by the Supreme Author of Nature, who has thus fearfully and wonderfully made us.

By these Considerations we are taught to put a different Value upon that Spirit or *Breath of Life*, whose Origin is from the Most High, and the muscular fleshy Fabrick, whose Foundation is from the Dust.

BUT though those Bodies of ours are surprizingly made, and obtain a Mechanism as far surpassing the most curious Contrivance of human Art, as infinite Wisdom does our finite Capacities, yet are they all govern'd and directed by the same Laws, Motions, and Impulses, as is generally perceivable in the Composition of the inanimate Creation, as we shall more clearly observe in the following Chapter.

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the Human Body, shewing the several Materials, &c. &c. &c.

C H A P. IV.

*Of the particular Powers, Properties
and Actions of those Materials that
compose a Human Body.*



HOW if we approach a little nearer, and unlock this Cabinet of Wonders, and take a Survey of the severall Springs, Wheels, and Pullies that set the whole Machine a going; how the principal Faculties maintain their Office, and govern and direct the lower Wheels and under Motions of the whole Body; we shall have the greatest Reason to confess, that it is a Subject worthy our highest Enquiry, and deserving of our best Attention and Consideration. But in order to prosecute this desirable Subject with greater Exactness, I find myself under a Necessity of taking to Pieces this admirable Frame we carry about us; to unhinge, and as it were unrivet those Pins and Screws that hold the whole Symmetry together, and take a distinct View of those Materials that compose the Fabrick, and the Powers and Qualities resident in those Materials, and the particular Laws they are govern'd and directed by in all their Actions.

THE human Body, as all other Bodies, in which are the Principles of Life, we perceive a Compound of two distinct Masses of Matter, which I call Solids and Fluids; the for-

mer of these are a Congeries of Veins, Nerves, Of the Pro-
and Arteries, Muscles, Bones, and Ligaments, perties resi-
which are all deriv'd from most minute dent in the
Threads or Fibres, and are ever constant to a Solids and
Part: These compose the several Organs of the Fluids.
Body, and give Bulk, Strength, and Symme-
try to the whole Machine, and are, as Anatomi-
sts call them, the *Parts containing*.

THE Fluids are smooth, soft, fluxile Bodies,
consisting of most minute Spheres, yielding to
the lightest Touch, and which are in constant
Motion round the Body; the principal of
which is the Blood or Chyle, the Spring from
whence all the rest derive their Origin.

THESE two Masses of Matter, thus distin-
guish'd, are endued with respective Powers for
carrying on the Laws of the Animal O'Eco-
nomy. The Solids being the Basis on which
all Motion depends, and on which the Super-
structure of the whole Machine is built, obtain
for the continual recruiting those Wastes that
are daily expended in supporting the Actions of
Life, a Principle of Attraction, whereby those
Particles, ordain'd for the Nourishment of the
Body, are assimilated to the Constitution of the
several Parts; that is, when the Particles nou-
rishing so coincide with the Parts to be nou-
rished, as to repair its continual Decays. To
this Principle of Attraction, which is the
great Instrument of Nutrition, there inheres in
the Solids a Principle opposite in Quality, and
that is a Principle of Repulsion, whereby the
elastic Spring of a Fibre strikes off, from joining
with the Part, any Particle of a Fluid not
fitted for Nutrition.

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THE next Properties we perceive resident in the Solids, are their Contractile and Distractile Powers; so that if you take any Animal Fibre almost besides those of the Bones, you will find it capable of being drawn out or lengthen'd much beyond its own natural Bounds, which length'ning of it I call its Distractile Power; and the Force of Restitution, with which it naturally returns, when at liberty, I call its Contractile Power. This length'ning and short'ning of the Fibres, alternately, widens and straitens their Canals, and of Consequence very much divides the Fluids they contain; for all the Fibres of the Body are vascular and tubose; even the most minute have Cavities, the most solid Bones not excepted; and all have Blood brought to them, or a proper Nourishment, according to the determin'd Laws of Circulation.

I M U S T confess, it is not a little Labour and Pains I have taken, in enquiring into the Nature and Cause of the Elasticity or Spring of an Animal Fibre, on which its Contractile and Distractile Powers chiefly depend; and I cannot, after the deepest Consideration, but be of Opinion, that those different Powers must proceed from the unequal Densities of the Particles that compose its Mechanism, which renders them of different Attractions; that while some of the Particles maintain their Attraction by Contact in the Distraction of a Fibre, others, more subtle, should let go their Attraction by immediate Contact, and yet remain within the Sphere of Electrical Attraction; and when the Cause of the Distraction is removed, should unite again by a Coincidence of those Electrical

cal Particles falling into the same Points they remain'd in, before the Application of the Violence.

THIS Principle of Electrical Attraction, or Attraction at a Distance, the Reader may see demonstrated, in Sir Isaac Newton's *Principia*. But, the more to strength'n this Opinion, if you take a Fibre, and dry it but a little, so that its more subtle Particles evaporate, it will lose all its Distractile Power, and, instead of being drawn out, as at first, will break and crumble into Atoms, as any other hard Body will do, upon the Application of the like Force.

WE perceive the Fibres, in every Part of a living Body, to be in a State of Distraction; for if you, in any Part, divide a Nerve, Vein, or Artery, the Ends will immediately start from each other with great Force, and will not easily be brought to unite again, without Ligatures or the Needle: So that it appears from this Experiment, that the Distraction of an Animal Fibre, or Muscle, is a State of Violence; and Contraction its natural State of Restitution, to which it always returns, when the contrary Action is removed: So that all the Fibres of an animal Body are in a State of Violence, yet we perceive it not to affect us, because all the Muscles have their Antagonists, which preserves an Æquilibrium in every Part of the Body.

BUT as there are Vessels so minute, whose Structure and Mechanism the acutest of our Senses, tho' assisted with the best-contriv'd Glasses, have not been able to demonstrate; so are we sure that those Vessels must contain Fluids of a Size and Bulk answerable to the Diameters of the Canals thro' which they pass; and from Experience, and the visible Phænomena's appearing in the greater Vessel,

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sels, we arrive at the greatest Certainty of what must, of Necessity, be their Action; they must be endued with all the Properties observable in others more visible, and the Particles of their Fluids must knock, impel, and resist one another, just as they do in the greater Vessels. Of this we are certain, from the Nature of all Matter in Motion, whether expos'd to our Senses or not, and that it alters its Figure and Motion, according to the different Degrees of Impulse and Division.

To those Qualities of the Solids, I must add the Power of Motion by Impulse; but as that is a Quality of Bodies, not existing in the Fibres themselves, but only deriv'd from the Consent of Parts, and the Power of being set on Motion, from the Impulse of other Bodies; so I shall wave the farther Prosecution of it, and go on to consider the respective Properties observable in the Fluids.

In the other distinct Masses of Matter called Fluids, or, as Anatomists term them, *Parts contained*, we may observe all the same Properties, the chief of which is the Principle of Attraction, or Cohesion, whereby the Blood unites with itself; and this is a natural Principle of the Blood, that it constantly inclines to Cohesion, the highest Degree of which, is Coagulation, or when it turns grumous; from falling into which State it is only preserv'd by the Impulse of the Heart, and Contraction of the Vessels.

BUT, besides this Principle of Attraction, the Blood obtains a Principle of Repulsion, to which, in all highly malignant Fevers, it ever tends; for its attractive Laws being entirely destroy'd, by those infinite Divisions, or Rarefactions it undergoes, from the Contractions of the Arteries, in such Cases, forces the Particles of the Blood to keep

keep at equidistant Spaces; and as the Blood can never recover its Tone, when once it is arriv'd at such a Degree of Fluidity; so is it a dismal Prognostick of the near approaching End of the miserable Patient.

WHEN we examine the Blood with a Microscope, it appears to consist of two Parts, a Multitude of red Globules, and a Serum, or Whey-colour'd Liquor; the former of which, as they pass the minutest Vessels, have their Spheres deprest'd into a Spheroid, as appears in its Circulation thro' a Fish's Tail, but again recover their former spherical Figure, as they come into larger Vessels.

THE Figures of the Particles that compose the Serum, are so exceeding small, as not to be perceiv'd otherwise than a homogene Lymph, in which the red Globules seem to float; and this Phenomenon we easily discover by the Microscope, in the Circulation of the Blood thro' a Frog's Lungs.

AT first the Actions of the Solids and Fluids are reciprocal; but the first Beginning of Impulse is from the Solids; and the several Motions, Divisions, and Alterations the Fluids suffer, are wholly depending on the Contraction of the Heart, and vibratory Motion of the Arteries; and as the Impulse of the Heart is stronger or weaker, so is the Motion of the Blood quicker or slower, so is its Divisions greater or lesser, which constitutes its several Degrees of Fluidity.

FROM this Division of the Blood arises that intestine Motion, which causes that natural Heat we sensibly perceive to affect every Part; for it is the Nature of all elastick Particles, upon their Division, to disjoin with a kind of Violence.

Now as the Blood is an elastick Body, and consists of elastick Particles, so, upon its Division,

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those Particles will jostle, or strike against others-nearest 'em, from whose Collision that intestine Heat arises in every Part of the Body, and is intended, or remitted, according as the Blood is more or less divided, which depends upon its greater or lesser progressive Motion, answering to the Impulse of the Heart, and Contraction of the Arteries; so that the Blood's Motion is threefold, Expansive, Progressive, and Intestine, all depending on the Influence of the Solids.

LIFE, therefore, abstractedly consider'd, and in its first Beginning, to me, appears to arise from a peculiar Modification of Matter and Motion rightly constituted; from this Matter and Motion arises the first Principle of Life, which is the *Animalcula in Semine*; and from the different Magnitude and Figure of Matter attracted to this Principle of Life, the greatest Organs of the Body result, as the Brain, Nerves, and Heart, which are ever first in Motion, and from whose Mechanism flow all the other Parts, which mutually corresponding with each other, compose that System of Matter and Motion we call a human Body.

I, THEREFORE, define a human Body, as far as it concerns a Physician's Enquiry, to be a Compound of Solids and Fluids, of a different Texture and Figure, mechanically cemented, with a determin'd Quantity of Motion impress'd upon all the Parts.

BUT, besides this Mechanism of the Body, this Structure of the Solids and Fluids, this Motion induc'd from the Consent of those two distinct Masses, and Life resulting from the Union of the Whole, there is a peculiar Harmony in the Make and Constitution of the Machine, which we call *Nature*, and by which I mean nothing else but an Endeavour in this Mechanical System of

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Matter and Motion, whereby it conspires to restore itself, under any great and imminent Disorder, to that Freedom of Action, necessary for carrying on the Offices of Life; and this Endeavour is only the Sum, or Strength, of all the Contractile Powers of the Animal Fibres in a Body conspiring to this End.

AND thus I have, with as much Brevity as possible, consider'd the Laws, Properties, and Actions, resident in those Materials, that compose the Instruments of a human Body.

C H A P. V. of Nutrition.

Of the Circulation of the Blood, and Secretion of the Fluids.

TH E Foundation thus laid, on I go to unravel the Mysteries of the Circulation and Secretion of the Fluids; for it is highly necessary, before I enter upon the Subject of Nutrition, that I trace the Course of the Juices, from their Original Being in the Body, and the several Progressions they make, before they come to be a Part of the Constitution.

THE Circulation of the Blood presupposes Motion; and before we can rightly explain the Mysteries of the one, we must endeavour, in the first Place, to get a clear Idea of the Origin of the other.

MOTION, therefore, is that great Principle by which all the Springs of Nature is set a going, by which the natural Heat of the Body is pres-

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serv'd, by which the Division and Fluidity of the Blood is maintain'd; so that neither Health, nor Diseases, can subsist in the Body, but as this Principle of Motion is either intended or remitted.

But the best Way to conceive how any Body is put in Motion, or, how Motion begins to exist in an animal Body, is, to consider it abstractedly from all Motion, that is, at Rest.

Now, an animal Body destitute of Motion, is an animal Body destitute of Life; for mere Life is only Heat arising from the intestine Motion and Circulation of the Blood; and, therefore, will it be of the greatest Consequence, that we be rightly appriz'd, from whence we derive this Motion, so absolutely necessary, that without its Influence we cannot sustain Life one Moment, as appears in those great Stops of Motion, that attend the more grievous Apoplexies, in which Life is extinguish'd, as it were, in an Instant.

If we seriously attend to the Nature of Things, as they are in themselves, and not as Men's Fancies have disguis'd them, we shall find it impossible for the most intense Thought, to conceive, how any Fluid can move in the Body of itself; for if we suppose a Particle of Blood at rest in any Fibre, or obstructed in any Vessel, certain I am, it would for ever continue so, if no *Stimulus* were apply'd, that might exert the Spring of that Fibre, and put the stagnant Particle in Motion again, whereby it might once more take its Fate among the circulating Fluids; for, by the Order and Connexion of all Bodies in the Universe, we plainly perceive, that nothing can move of itself, and that the Motion of every Body is subordinate to, and depending on, other effecting Powers, prior to their Motions.

If this then be so, and the Fluids have not a self-moving Principle in themselves, they must derive it from some other Powers, and that can be nothing but the Impulse of the Heart, and Contraction of the Arteries, because no other Powers are lodg'd in the Body, that can affect the Fluids, especially the Blood, for whose Motion only I am now concern'd.

AND here, to avoid needless Repetitions, I think proper, once for all, to take Notice, that the Arteries are long Cylindric Cones, that convey the Blood to every, the minutest *Foramen* of the Body, for Heat and Nourishment, of which the *Aorta* is the largest, arising out of the left Ventricle of the Heart, and from which, all the rest receive their numberless Branches. It consists of three Coats, the middle of which is muscular, and greatly elastic, and which contributes very much to the Fusion of the Blood, as it circulates. All the Arteries end in Glands, that have excretory Ducts with a spiral Contortion, that spin out into Veins which encrease bigger, as they approach the Heart, till at last all their numberless Ramifications terminate in one Trunk, called the *Vena Cava*, that penetrates the right Article: Their Office is to receive the Blood from the Arteries, by the Mediation of the Glands, and reconduct it back to the Heart, for fresh Heat and Motion.

THE Motion of the Fluids, therefore, being in Obedience to the Force of the Vessels, the greater is the Impression of the Vessels, the quicker will be the Motion of the Fluids, and the greater will be their Division, and of Consequence the natural Heat of the Body; for as Life is nothing but Heat arising from Motion, so is Death nothing but a Privation, Extinction, and Interception of that natural Motion, and, of Con-

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sequence, of that natural Heat depending on that Motion.

Thus far we have gone in settling the Motion of the Fluids, and proving their Dependence on the Contractile Powers of the Arteries. Which leads us to examine another Point, not attended with fewer perplexing Difficulties, and that is, concerning the Motion of the Solids.

I Now from Experience we are certain, that the Contractile Powers of the Arteries are owing to the Impulse of the Heart, which, on all Hands, I think, is confess'd to be the Principle of Motion in human Bodies.

But how this principal Spring is set a going, by what Means it continues, directs, and governs all the under Motions to the latest Period of Life, seems to me, I must confess, one of the deepest Mysteries of humah Nature; for, to say it derives its Motion from any thing within the Body, is to deny it to be the Principle of Motion, for that Thing that causes its Motion, is the Principle of, and antecedent to it in Motion: Thus, to say the Blood gives Motion to the Heart, by the Pressure of its *Pondus*, as it descends from the Head, and superior Parts; and that the Heart gives Motion to the Blood, by the Impulse of its Action; is, in effect, to say, that the Blood is both a Cause of Motion, and the Effect of Motion, from the same Cause; that is, that they are both first, and both last in Motion, which is a confounding of the Laws of Nature; for according to the Principles of Philosophy, the same Cause can never descend to be an Effect, while it continues to be a Cause, no more than the same Effect can ascend backward, and be a Cause, *anion* *back*. But then, it is said, that the Spirits distilling from the Brain, by the *Par Kagum*, into the Fibres

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of the Heart, causes its Contraction, and of Consequence its Motion; but then the Question recurs, *What gives Motion to those Spirits?* and that, upon due Reflection, will be found to be the Heart; and therefore I shall take it as a *Postulatum* granted, *viz.* That the Heart is the principal Movement in human Bodies, seeing its being so is founded on such evident Proofs.

N o w as this Point is settled, and the Heart is granted the principal Motion of the Body, so it cannot be said to be the Cause of the principal Motion; and this leads us into a distinct Enquiry, *viz.* *What it is that directs the Heart's Motion?*

I F we consider the Frame, Texture, and Disposition of the Solids, that compose a human Body, and the Analogy they bear to those exquisite Contrivances, form'd by the curious Hand of Art, we shall perceive, in this most absolutely perfect Piece of Mechanism, Nature ever created, a Pump in the Heart, Hydraulicks in the Blood-Vessels, Cisterns and Strainers in the Lymphedu&cts, and several Glands, Levers, and Pulleys in the Muscles, and a Pneumatick Engine, or Pair of Bellows in the Lungs; all which are so subordinate to each other's Impressions, or Impulses, that it easily appears, that the respiratory Organs are the first Conveyers of the Cause of all Motion that accrues to the Body; and as those Organs, by their fine and spongeous, vascular Substance, are only fitted for the Reception of the lightest Body, so that, whatever it be, must constantly imprint its Influence on this Bowel; and this we cannot perceive to be any thing but the fine Particles of the external Air, we continually breath in Inspiration.

I T is from the Spring of the Air, that those two alternate Motions of Elevation and Depression

sion of the Chest arises, that constitute that complex Action we call Respiration, which is only a Compound of the two former. Upon the Elevation of the Chest it is, that the aerial Salts descend by the *Trachea*; and, as a *Stimulus*, vibrates upon the *Vena Pulmonalis*, which makes the Motion of the Blood quicker to the Heart.

THE Elevation of the Chest, on which Motion Inspiration depends, in my Opinion, seems to arise from the elastic Spring of the Air's Spheres, included in the Globules of the Blood, which, in every Expiration or Depression of the Breast, as they pass the *Arteria Pulmonalis*, being compress'd beneath their natural Elasticity, expands their little Vesicles, on which the *Arteria Pulmonalis* enlarges, and of Consequence, a little, bears up the Lungs, upon which the Air descends by the *Trachea*, and inflates them to their full Dimensions; whereupon the Blood obtains a freer Circulation; for this seems to be the Condition between those different Actions of Inspiration and Expiration, that, in the former Action, the Blood passes freer; in the latter, it is ground smaller, from the Compression of the Vessels, that, by the *Systole* of the Heart, it might more easily be pump'd into the *Aorta*.

The Spring of the Air, the great Instrument of Respiration. OF such extraordinary Use, and absolute Necessity, is this Aerial Salt, I have been speaking of, that a few Moments Deprivation of it, will infallibly, destroy the strongest Animal in the Creation.

THIS I have ever found to succeed in those Experiments I have made with the Air Pump; that upon withdrawing the Spring of the Air, from the Animal included in the Receiver, it would constantly languish, sicken, and die, as the Receiver was more or less exhausted; nor is it

it less observable in live Dissections, than the Hearts of several Animals (especially those of sluggish Motion) will throb and beat, some time after they have been exempted from the Body.

THE Blood of a Frog will circulate thro' the Lungs six or eight Hours in Winter, and four or five in Summer, after it has been dissected, and the Entrails turn'd out of the Body, for the convenient placing the Microscope, and after the Force of the Air is unable longer to continue the Motion of the Heart; if you touch the Fibres with a fine Needle or Lancet, it will, afresh, begin to vibrate, and plainly discover evident Tokens of Motion, which clearly demonstrates, that it would be mov'd still to beat on, with a greater *Stimulus*; so that I cannot easily be brought to believe, that either the Influx of the Animal Spirits, much less the Ebullition or Accension of the Blood, can be its Cause, but rather the Effects of those pungent Salts, pricking upon the fibrous *Parenchyma* of this Bowel, or, rather, the Vessels leading directly to it. And this I take to be the true Origin of all Pulsation, and first Motion of the Heart, and Circulation of the Blood thro'out the Body, a languid Pulse being continu'd to every the minutest Artery, for the better Conveyance of the Blood to the most distant Parts. And what, still, helps greatly to confirm me in this Manner of Reasoning, is, that Animals will not live in this Element of Air, if depriv'd of its Nitre, as evidently appears from the several Experiments I have made. I took a Rat, and put it into a Receiver full of burnt Air, or Air that had pass'd thro' the Fire into the exhausted Receiver, by means of a Tube adapted to the Vessel, for that Purpose: The Creature no sooner

er was in, but grew sick, fainted, and presently after died. The like Fate had several Birds we put in, to support the Experiment; and a lighted Candle, as soon as ever it came within the Sphere of burnt Air, immediately went out, and was extinguish'd: And all this Destruction and Ravage that happen'd to those Animals, was only occasion'd thro' Defect of this Aerial Salt I have been speaking of, which, I believe, constitutes the Spring of the Air, and which was consum'd in its passing thro' the Fire.

So that the Spring of the Air is to the Motions of Animals, what the Force of the Balance is to the several Movements of a Watch; that is, it governs and directs all the greater Wheels, and under Motions of the whole Body.

HAVING thus far enquir'd into the Laws and Boundaries of Motion, and the manner how it is first impress'd on the Body, proceed we, in the next Place, to examine the Nature of the Chyle, and the Progress it makes, before it comes to mix with the Blood, since it is a Fluid quite distinct from the Blood, and conducted by Vessels that have no Dependance on the circulating Fluids.

THE continual Wastes that are every Moment expended from the Constitution, in carrying on the Actions of Life, make it necessary, that fresh Supplies should continually be dispens'd into the Blood; but seeing that continual taking of Food, had been an Annoyance to Nature, and employ'd too much of that precious Time, our Reason will inform us, we seem not altogether intended for; therefore, has Nature, to remedy this Inconveniencie, plac'd in the middle of our Bodies a Cavity, or Stomach of Capacity, large enough to contain such a Quantity of Nourishment,

ment; as might employ a convenient Time in dispensing it into the Blood. To the upper Orifice of this Bowel, is continu'd a Gullet or Funnel, thro' which our Aliment passes into the Stomach, after it has undergone a due Mastication in the Mouth, and is by its Mixture with the *Saliva* fitly prepar'd for the Reception of that Bowel.

As all Fluidity arises to the Blood from the *The Fluidity of the Impulse of the Heart, and vibratory Motion of the Solids*; so the Digestion of our Aliment depends upon the Contraction of the muscular Coat of the Stomach, which is assisted, in this important Action, by the Descent of the Diaphragm, and *Blood depending upon the Impulse of the pulse of the Solids*. Contraction of the abdominal Muscles; and as the Meats are more or less thin'd or divided, by the Heat and Juices of the Stomach, in Conjunction with the former Assistance; so is it more or less fitted for its Passage over the *Pilorus*, which being higher than the middle of this Bowel, suffers nothing to pass, but the lightest, and thinnest Parts of the Chyle; and those will be thinnest and lightest, that, from the Impressions of the Stomach, have suffer'd the greatest Division, and of Consequence will be the first that will be forc'd over into the Intestines; for all Bodies gravitate in Proportion to their Solidities, and Meats are more or less easy of Digestion, as they consist of Particles more or less solid, or as the Particles they contain are more or less easily separable; not but the hardest Meats may be digested in Stomachs, whose muscular Fibres are able to overcome the Resistance they make to Division: For Digestion, if I define it right, is only a dissolving of our Food into a most subtle Juice, whose Particles are of a Smallness capable of passing the Orifices of the Lacteals.

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Now, if this be so, and how it should be otherwise, I must confess, I know not, then will it clearly appear of what Consequence it is, that the Meats we take for our Nourishment, should be well ground with the Teeth, before we swallow them; for the more undivided our Meats are, when they come into the Stomach, the greater Force do they demand from this Bowel, in order to a thorough Digestion; and for this Purpose, Nature has implanted in either Jaw several Kinds of Teeth, some to cut, break, or divide hard Bodies, such as the *Dentes Canini*, others to grind it smaller, as the *Dentes Molares*; so that this Division, our Aliment suffers in the Mouth, from the Mixture of the *Saliva* with the Mass, may not unfitly be call'd the first Digestion, and when well perform'd, requires the less Assistance from the Stomach.

On the contrary, the lesser our Meats are digested in the Mouth, that is, broken by the Teeth, the greater Impressions do they require from the Stomach, which, if long continu'd, in Time, will ruin this Bowel; for so great is its daily Office, that, we generally perceive it the first that gives Way, from whose Disorders arise most of those chronic Diseases, we insensibly fall into.

Now, if the passing of the Aliments out of the Stomach into the Intestines, be perform'd in due Time, Manner, and Order; if the pancreatic and biliose Juices, press'd from their respective Ducts, are fitted for their several Offices of Separation, Attenuation, and Dilution of the Chyle, which Duties they perform as a *Stimulus*, in raising the Contraction of the Intestines, whereupon depends that vermicular Motion we call Peristaltic; then can no Disorder arise in the animal

animal Oeconomy, nothing, barring exterior Accidents, whereby the Body can receive any Damage, but, the thin, depurated Chyle, will easily pass the Lacteals, and the Dregs or Fæces descend, and surmount all those Stops, Letts, and Impediments, that arise from the *Plice* or Wrinkles of the Intestines, form'd by the inmost Coat being larger than the rest, and intended by Nature for the preventing the Chyle's too speedy Descent.

THE Chyle, being thus percolated thro' the *Progress of* most fine Orifices of the Lacteals, which are *the Chyle.* always most numerous in the beginning of the Intestines, glides all along those transparent Channels, which, by Authors, are distinguish'd into *Vena Lactea primi & secundi Generis*, till, at last, it arrives at the *Receptaculum Chyli*. From thence it ascends the *Ductus Thoracicus*, and having got into the Breast, it runs a little Way, and then empties into the subclavian Vein, where it meets with the Blood; but, all along its March, from the Intestines, to its mixing with the Blood, are interspers'd here and there, several Lympheducts, that contain a clear *Lympha*, greatly volatile, which, as I suppose, is to serve as a *Stimulus*, to facilitate the Chyle's Motion, and thereby prevent its stagnating in the Vessels; and, this is the Course the Chyle takes from the Stomach, where it is concocted, till it mixes with the Blood in the subclavian Vein, where they mutually join and march directly to the Heart, the greatest of all the Organs for Action.

IT is the Spring from whence all vital Motion proceeds, and which, by its *Systole* and *Diastole*, directs all the Powers of the whole Body. Not that I believe the Chyle immediately loses its Nature, when it arrives at the Heart, for Ex-

perience

perience assures us, that, if a Vein be open'd five or six Hours after a full Meal, the Chyle may even then be observ'd to float on the Surface of the Blood, so that it is reasonable to suppose, in a Case, where no Demonstration can be had, that the Chyle is not so entirely assimilated or combin'd with that red viscous Humour, as to become one attractive, homogene Juice with it, till after repeated Circulations.

BUT what Number of Circulations are necessary to compleat the Chyle into Blood, or an alimentary Juice fit to nourish the Body, I must confess my self at a Loss to determine, because more or fewer will be necessary, as the Contractions of the Solids are greater or lesser.

THE Blood, I say, being not fermented, but combin'd together, by its own attractive Principle, receives Heat from its Motion, and the Impression of the Vessels, whose Recrements, as well as Excrements, are separated from it, by the various and admirable Contexture and Convolution of the complicated Arteries, whose extreme Plications form the Glands thro' which they are secreted, while the viscous Humour keeps close and entire.

INDEED, Chymistry, in those latter Ages, had so clouded the Actions of Nature with dark, obsolete, and unintelligible Systems, which, certainly, needed an *Index* to clear them from Obscurity; for granting all that any Chymist can desire, that, in the Blood those Principles of Salt, Sulphur, and Oil do exist, yet if there be occasion to diminish any one Predominant, Application must be made to the Vessels, and by either lessening or encreasing, bracing or relaxing, their Vibrations, we lessen or increase the Velocity of the Blood's Motion, we lessen or increase its

its Viscidity, and of Consequence overcome those Diseases that arise from a Redundancy of that Principle, and reduce Nature to her just Balance.

BESIDES, we are certain, that there can be no Principles existing in the Blood, that were not in the Chyle, but what must be owing to the Contraction of the Vessels; and if the Chyle contains any Principles, not deriv'd from our Aliment, they must be owing either to the Impressions of the Stomach, or the Juices mixing with it there; so, that, whatever Principles the Blood contains, must be varied, exalted, or depress'd, just as the Vibrations of the Solids are varied, exalted, or depress'd.

AND hence appears the Falsity of that old Maxim, *Vitium prima Coctionis non corrigitur in posterum*; that is, if our Aliment escape a due Digestion in the Stomach, it can receive no further Benefit from any after Impressions; which is false in Fact; for the Arteries obtain as much Power, in destroying the Viscidities of the Blood, its vicious Qualities, and preparing it for the nourishing of the Parts, as the Stomach indigesting it for the Reception of this Fluid. The *Vena Lætea* are Stops to let in nothing to the Mass, but what the Action of the Arteries may overcome; and to demonstrate this Point more clearly, in live Dissections I have always observ'd the arterial Blood much more thin, divided, and attenuated, than the venal, and of a Colour more florid; which different Qualities, I look upon, to proceed from the different Contractions of the Vessels; for as the Arteries, from their Muscular Coat, obtain a much brisker Motion than the Veins, so are the Impressions they make on the Fluids much smarter, whereon the Division and

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Rarefaction of the Blood entirely depend. And what still more confirms me in this Point, is, that the arterial Blood, when let out into a Porringer, would not so quickly separate into a *Serum* and *Crasimentum*: which Difference I conjectur'd to arise from the different Impressions of the Vessels, the languid Motion of the Veins not suffering the *Serum* and *Crasimentum* so to unite, but that they generally separate upon Emission; generally, I say, because there are some Instances, that no Time could bring them to separate.

We, generally, in Blood let out into a Basin, perceive the Superficies to appear of a florid Red, and the Bottom of a dark Colour, which Redness, I conjecture, is owing to the Nitre of the Air; for the Bottom, if expos'd, will in a little Time acquire a florid Red, little inferior to that of the Surface; tho' it may be question'd whether the heavy Particles gravitating, and subsiding to the Bottom, may not communicate that dark Hue most Blood seems to have, that settles any Degree beneath the Surface.

As the Quantity, Velocity, Fluidity, Heat, and Motion of the Blood, are Qualities entirely depending on the Contraction of the Arteries; so is its Distribution, by Means of the foreaid Powers, communicated to every minute Part of the Body, for its Support and Nourishment; a Part of which is convey'd to the Brain, by the Carotid Arteries, which, after they have enter'd the Scull, joining with the Cervical, give Branches to all the several Lobes of the Brain, which, after infinite Divisions, terminate in those fine Glands, that compose its cineritious or cortical Substance, from whence the Animal Spirits are generated.

INDEED,

INDEED, I must confess, we have no Demonstration of their Existence, but from the Necessity of the Thing. And no Hypothesis, that I know of, how artfully soever form'd, solves the Phænomena's of Motion so well, as the admitting it to arise from the regular Influx of the Animal Spirits influencing the Nerves : And therefore we shall take their Existence for granted, till some more happy Genius shall find out a better Expedient, to stop a wide Chasm, in the Philosophy of Animal Bodies, which would manifestly appear on our rejecting their Subsistence.

*No certain
Demonstra-
tion of the
Existence of
the animal
Spirits.*

THE Animal Spirits, therefore, being secreted from the most fine, subtle, spirituous Parts of the Blood, by Glands that compose the exterior cineritious Parts of the Brain, brought thither by the Carotid Arteries, much more numerous than the Veins, because of the additional Expence, are forc'd into the Origin of the Nerves, which are contiguous to each Gland, by the *Systole* of the Brain depending on the Force of the Carotid Arteries, which, in every Contraction, makes a Compression to unload their Contents.

THE Brain is form'd of an infinite Congeries of most fine Glands, soft and yielding by Nature, that the *Systole* of the Carotid Arteries might be capable of performing this Office ; and the *Diastole* of the Brain depending on the same Motion of the Arteries, is that Space of Time, wherein the Glands recover their Spring, to unload again at the succeeding *Systole*. And as by the *Diastole* and *Systole* of the Heart, the Blood is driven to every Part of the Body for Supplies, so by the same alternate Motions of the Brain, depending on the contractile Powers of the Arteries, as they do on the Impulse of the Heart, are the Animal Spirits dispers'd to every

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Fibre of the Body, for Sense, Perception, and voluntary Motion.

Now, that this is no imaginary Fancy of my own, hatch'd to support an Hypothesis, will evidently appear from this one Observation ; that many shall lose the Use of their Hands or Legs, which Loss we call a Palsy of the Part, when, notwithstanding, the Circulation of the Blood shall remain free. But, if those vibratory Motions of the Nerves did wholly depend on the Contraction of the Arteries, as they are dispers'd together, then the Motion of no Part could be lost, unless the Circulation of the Blood, at the same Time, were obstructed, or at least greatly impair'd, the contrary of which we often observe to happen, as in the Case of a Palsy, in which the Pulse suffers no Variation from those in the most sound State of Health.

HENCE appears the Absurdness of all those fine Things talk'd of by *Willis* and others, concerning the Mechanism and monstrous Explosions of the Spirits when disaffected, which were mere Whimseys, and the speculative Fancies of a warm Brain, without any just Reasons, from the Operations of the Animal Oeconomy to support them.

CONCERNING the Secretion of the several Fluids, I have only this to add, that they are all of them more or less viscid, in Proportion to the Length of the complicated Arteries, out of which the Glands are form'd, their different Orifices, and the Quantity of Motion the Blood obtains, when it comes to the Mouths of the Secretory Vessels ; for a Gland is only a Compound of an Artery, Nerve, and Lympheduct, with a Spiral Contortion, which ends in a Vein ; and the more Plications go to the Structure of a Gland, in any Part, the more viscid is the Liquor secreted ; and this is the Reason,

son, why the *Semen* is the most viscid Juice that is secreted from the circulating Mass, the Plications of the Glands of the *Testes* making near three hundred Ellis.

AND, in the Secretion of the Gall, the *Vena Porta* seems to have been appointed by Nature, to convey the Blood from the Spleen to the Liver, that the Blood moving slower, the Particles of Gall might be dispos'd to unite, which by the Contraction of an Artery, would have been disengag'd more asunder; or, if it had been secreted, would have been so sharp, as often to endanger the Bowels with Vomitings, Fluxes, and Inflammations.

THE Secretions of various Humours in different Parts of the Body, serve, either to render the several Parts more pliable, as in the Secretion of that oily Lymph by the Glands of the Joints, or to help the Digestions, or to assist the Motion of the Chyle, seeing the Lympheducts are most numerous near the Chyliferous Vessels, in their Progress from the Intestines, to their meeting with the Blood in the subclavian Vein.

AND thus I have consider'd, in as brief and concise a Manner as possible, the Laws, Properties, Motions, and Secretions of the Blood and Chyle, and the Ends they are destin'd for; which brings me to that great and last Law of Nature, for whose Sake all the rest were ordain'd, and that is Nutrition.

C H A P. VI.

*Of the Principles of Nutrition, Growth,
and Increase of Bodies.*


E have endeavour'd to clear up from all Difficulties, in the Beginning of this Treatise, the great Power this Principle of Attraction obtains in keeping together the Mass of Matter, that constitutes the Bulk of this greater World, and how the Parts would certainly slide off from their Centre, were not their Centripetal greater than their Centrifugal Force; that is, were not their Attractions stronger than their Repulsions, and consequently the Structure of the whole preserv'd from falling asunder.

Now, if we examine into the Nature of Nutrition, and Growth of Bodies, we shall perceive that this Principle of Attraction is not less concern'd in propagating the Increase of Bodies, that is, their Vegetation, than in preserving this Mass of inanimate Matter from starting off its Centre.

To illustrate this Point more clearly, I beg leave to digress a little, and make some Observations concerning the Contrivance, Art, and Skill, Nature uses in the Production of Vegetables,

*of the
Growth of
Vegetables.* IN all Seeds there is a Speck of Entity, which I look upon to be the first Beginning of Life, to the yet unembriolated Plant, and in which is contain'd all the future Plant in Miniature, and answers to the *Animalcule* in

in Semine, a Discovery owing to the Microscope, and in which is virtually infolded all the several Parts of the future Animal, that, in Proces of Time, dilates and unravels its Integuments and Membranes, till they arrive at the utmost Stretch of Expansion, which bounds the Growth of all Species of Creatures: So that the material, visible Seed, is only the Husk, or, if I may so call it, the Egg to preserve the yet unform'd Plant, till it is able to resist the Injuries of Weathers, and swell out of its native Bed of Embriornism.

It is wonderful to observe, how Plants, when they first begin to bud, will shrug and contract the little Stem, as if they were afraid to peep out their tender Heads, for fear of being nip'd by the Violence of Weather; but having suck'd in more Strength from our great Parent the Earth, they then begin to make Resistance to this Element, and spread out into Leaves and Branches, which are nourish'd by the Attraction of Sap from the Roots, that ascends to the Tops of the tallest Oaks or loftiest Cedars, by Means of a vibratory Motion in those hollow Fibres that compose their Bulk; for Vegetables are Vascular, or a Compound of Solids and Fluids, as well as Animals. And this Principle of Attraction appears not, in any one Instance, so evident, as in the Management of Fruit Trees, especially Wall Fruit; to which end, your curious Gardeners, to improve their Stock, and make it larger in Bulk, have got a Way of thining their Trees, where they appear luxuriant, or greatly to abound; and, by this early culling or lessening the Number of Peaches, Apricocks, or Nectarines, &c. they encrease the remaining Stock to a much greater Bulk and Fineness; so, that tho' they

have, by this Means, fewer in Number, yet it answers their Ends, by being much larger, more curious, and, consequently, deserving of a better Price.

No R can there be any other Reason assignable, why the removing a Part, should encrease the Growth of the Remainder : to a much greater Bulk, than they would, naturally, arrive to, if the others had not been remov'd; but, that this Principle of Attraction becomes stronger in the remaining Fruit, in Proportion to the Quantity remov'd ; and, which consequently attracts a greater Quantity of the Sap for the Increase of their Bulk.

I M U S T confess, the Ascent of the Sap may easily be accounted for, from the vibratory Motions of the Tubes, on their contain'd Juices, which is both expansive and progressive ; and, upon which two Motions, their Increase of Growth in Length, Breadth, and Thickness, entirely depends, as we shall more clearly illustrate, when we come to treat of the Increase and Growth of animal Bodies. But then, we are to consider, they only are the Instruments of Conveyance, not of Nutrition ; they fit and prepare Nourishment, and carry it to the several Parts, as the Arteries do the Blood, both above and beneath the great bulbous Root ; which Bulb I, sometimes, am inclinable to think, answers to the Office of Hearts in Animals, whereby, in Vegetables, the Alimentary Juice is equally dispers'd to all the Fibres of the Root under Ground, as to the Parts above, and have the same Cause of Increase. But, be that as it will, of this we are certain, that the Fibres are not the Cause of the immediate Cohesion of nutritious Particles, that Property is effected by the Principle of Attraction ;

tion; that is, when a Particle of a Fluid touches at so many Points as detains it, which, in Time, gradually increases its Attractions, by firmly cleaving so fast, as to become a Part of the Substance of the Tree.

Now, I say, if there were not this Principle of Attraction, to regulate the Motion of the Sap, it would flow, most naturally, into those Channels it had been us'd to from the Time that the Fruit began first to bud, flower, and grow, and no After-cropping of any Quantity, would be able to alter the Course and Order of the Sap, unless it were directed by this Principle of Attraction, which, now, is more increas'd in that remaining Part of the Fruit, and which, with greater Power attracts greater Quantities of Sap to increase their Bulk, on which their Finess so much depends.

N O R do the Twigs wither, fade, or die, unless by Accident, but only Sap enough is continu'd to preserve their Life, till the Fall of the Leaf, when most Trees fade and die, and lose their Verdure, in order to rise again in the general Resurrection at the ensuing Spring.

N o w if we ascend to contemplate the Manner of the how those Bodies of ours acquire their Bulk, Increase and Growth, we shall find it a Point sub-
Growth of
Animal
Bodies.ject to the most perplexing Difficulties.

B y the clearest Reflection we can make, we perceive ourselves to have grown, by which these Bodies of ours are evidently increas'd, acquire Stature in Bulk, Length, and Thickness; but how this growing Principle is supported, in what it consists, and how the Assimilation is made, are the grand Difficulties that attend this Enquiry; for, here, we are to account, on what Mechanic Laws the Nourishment of our Bodies is assimilated

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lated to the Constitution of the several Parts; that is, how the Fibres of any Part (for of such all the Parts are compounded) acquire their Rigidity, Stiffness, and Consent; that is, (that I may express my self in Terms as little ambiguous as possible) how a Fluid loses its Fluidity, and is converted into a Solid; for without this Change, there can be no Nutrition, Growth, or Increase of Bodies, which we evidently perceive to be in a constant Progression in all younger Creatures, till they arrive at their perfect Stature, or Boundary, to which they are limited by Extension; a Principle inseparable to all Matter, and which Word expresses the utmost Bounds or Superficies which a Body at any Time obtains. But here I mean it to understand, that Achme or full Stature of Growth, to which we at a certain determin'd Time of our Lives arrive at, and, in Men, is generally understood to be about the thirtieth Year.

THE Blood, as we have already observ'd, is convey'd by the Impulse of the Heart, Contractions of the Arteries, Vibrations of the lesser Vessels, and Oscillatory Motions of the least of all, into every the minutest *Foramen* of the Body, for its Support and Nourishment; which, from the foresaid Motions, is continually more and more refin'd from its former Nature of Chyle, is more and more assimilated into the perfect Nature of Nourishment. But how many Circulations are necessary to perfect the Chyle into a Fluid, high enough to nourish the impair'd Parts, or to exalt the Fluids into a State high enough to lose their Fluidity, is a Question, I must confess, not in our Power to determine. All that in this Affair we can, with any Certainty, adjust, is, that the greater are the Contractions, Vibrations,

ons, and Oscillations of the Vessels, the greater will be the Motion of the Fluids, the oftner will they come to the Test of the Strainers for Secretion, the sooner will be their Attenuation and Digestion, and of Consequence, the quicker will be their Assimilation.

INDEED the Contraction of the Vessels do not only contribute their Impressions to the bringing the Fluids, destin'd for the Service of Nutrition, within the Sphere of Contact, but also, by their Influence, they fit them with such Surfaces, as may aptly join or coincide with the impair'd Parts.

Now to demonstrate the Cohesion of Fluids, or the Manner how a Fluid may lose its Fluidity, and be converted into a Solid, we need only take Notice of a very familiar Instance, that often here in the Winter happens; and that is, of the Conversion of Water into Ice. Now this great Change, which, in some Parts of the Globe, would appear incredible, is brought about by the nitrous Salts of the Air, fixing the soft, yielding, fluxile Spheres of Water, and hindering their rolling Motion, which Motion constitutes its Fluidity, and which being destroy'd, gives it that dense Compactedness of Parts, that constitutes the Essence of Ice.

By this one Experiment we demonstrate the Possibility of Nature's forming the most hard, compacted, solid Substance, from the softest, smoothest and most fluid Body, such as Water is. And if this simple, uncompounded Element is capable of producing such Changes, why may we not with Parity of Reason conclude, that the Blood contains Particles that may afford Nourishment, not only to the most solid Bones, but to Bodies considerably harder, if such were necessary

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cessary to the Constitution of these Bodies of ours?

IN the Matter of Nutrition we are to observe, that the Figures of the Particles nourishing, must be widely different from those that compose the circulating Fluids, and till the Force of the Arteries have destroy'd the Sphericity or Fluxility that constitutes the Nature of all Fluids, it is evident they cannot join with the Constitution of any Part. It is the Destruction of the Spheres of the Blood, that fits them with proper Surfaces to constitute a Solid, without which there can be no Nutrition; for we are to consider, that Nutrition implies a Waste of Parts, and therefore the impair'd Parts will have *Vacuola's* caus'd from the continual Attrition of the Blood circulating thro' the Fibres that compose them.

N o w the Particles to nourish must consist of proper Surfaces, that may fill up the *Vacuola's*, and supply the Wastes that are daily made from the Constitution of the Parts; and the more Points they touch at, when once they join with any Fibre, the stronger will be the Attraction, and of Consequence, the firmer will be the Nourishment of those Parts; and in this consists Nutrition, which is a daily repairing of what is expended, in carrying on the Actions of Life.

BLOATINESs, therefore, must arise in all Cases, where the Solidities of the nourishing Particles are lesser than their Surfaces, in Proportion to the Quantity of Matter they contain, which must render them less compactedly adhering to the Constitution of the Body, and of Consequence must give them greater void Spaces, from whence arises that State or Condition we call a bulky, unweildy Corpulency.

THUS

Thus far we have consider'd, how our Bodies acquire the Reparations for those Wastes, that are daily expended in carrying on the Laws of the Animal Oeconomy.

THE next Point that comes under our Enquiry, is, How the Parts encrease and gain Growth; which brings us to consider the Qualities of the Blood, and the several Motions it is endued with.

WHOSOEVER will take nine or ten Ounces of warm human Blood, and place it in a Receiver, as soon as the Air is a little remov'd by the working of the Air-Pump, you will perceive it to bubble and boil like a Pot, which evidently demonstrates the great Quantity of Air contain'd in the red Globules of Blood. And now let us consider the Consequences of the Blood thus a-bounding with Air, and in Motion.

As the Air is an elastic, compressible Body, so, being included within its Spheres, it must render the Particles of Blood elastic; and on this Account it must obtain a threefold Motion, the one Expansive, the other Progressive, and the third Intestine. As the Heart contracts, to fling the Blood into the *Aorta*, it will be compress'd, but upon its Freedom, from the *Diaftole* of the Heart, it will expand itself, and by this Means distract the Arteries beyond their natural Dimensions; for Fluids press equally in all Directions, and of Consequence equally enlarge the Cavities of the Vessels in every Part; but then, the Muscular Coats of the Vessels, especially the Arteries, will contract or restore themselves, to force forwards the Blood. Now during the Expansion of the Arteries, when their Canals are widen'd, the Particles destin'd for Nutrition will enter the impair'd *Vacuola's* fitted for their Reception: And here

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here we must consider, that as all the Motion of the Vessels depend on the Impulse of the Heart, so are they all alternately contracted and distractred together; and in this Expansion of the Vessels, and Attraction of the nourishing Fluids, consists the Nature of that Growth we call the Bulk, Breadth, or Thicknes of Bodies.

By the progressive Motion of the Blood, which depends on the Restitution of the Arteries from their Expansion, or State of Distraction, (for by the Word *Contraction*, I intend both the *Systole* and *Diaſtole* of the Heart and Arteries) it will come with greater Force to their Confines, and of Consequence, will work out or enlarge their Extremities, on which Enlargement we account for the Growth we gain in Stature or Length, which, by the Division of the *Aorta*, is equally both Ways, the Ascendant Trunk supplying the Head and other Parts with Blood, while the Descendant conveys it to all the inferior Parts of the Body, for their Support and Nourishment.

THERE is one Question more I have to resolve, or at least to endeavour to resolve, before I leave this perplex'd and intricate Subject, and that is, *What Parts of the Blood are chiefly and principally concern'd in nourishing the Body?*

To resolve this Question more clearly, we are to consider, that besides the Bones, which are out of the Question, these Bodies of ours are composed of two Kinds of Fibres, vastly different in their Natures, the one Nervose, and exquisitely quick of Sensation, the other Carnose, and destitute of all Sense and Perception. Now the more of those Carnose Fibres, or this *Parenchyma*, as the Ancients call'd it, goes to the Composition of any Part, the more dull and senseless is the Perception

ception of that Part ; and this is the Reason why the Liver and Spleen, where this *Parenchyma* greatly abounds, are so destitute of Sense ; so that the Patient, under all the Ailments they are subject to, rather suffers an Uneasiness than real Pain, which often makes them procrastinate the Cure, till by the Inveterateness of the Disease, all Hopes of Recovery are lost, as not seldom happens in Schirrosities of the Liver and Spleen.

THIS *Parenchyma* serves every where almost as a Fence to the Nervose Membranes against the Acrimony of the Juices, which otherwise would greatly annoy Nature with continual racking Pains.

NOW these Carnose Fibres, or *Parenchyma*, in Conjunction with the Nervose, is that Composition that constitutes all the Parts, and are nourish'd by different Juices ; for the Nerves, which give Sensation to every Part, and render every Part more or less sensible, as they more or less abound in any Part, are nourish'd by a white *Succus* or Lymph, continually ouzing into their Origin, from the Pulsation of the Brain, depending on the *Systole* of the Carotid Arteries, as we have before explain'd, and this Juice many will have to be the Vehicle of the Animal Spirits ; but, be that as it will, I am sure it must contribute something to the Nourishment of the Nerves ; for the few Blood-Vessels, we perceive here and there dispersed on their outer Coats, seem in no wise capable of answering that Office ; and what strengthens this Opinion, is, the many Observations I have made of People, that would look well, grow fat, and yet labour under great Disorders, from Faintness, Weakness, and Low-spiritedness ; so that were the Particles that give that Bulk of Constitution to the Muscular Parts, to nourish the Spirits, or restore the Tone of the Nerves,

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Nerves, then those People would always be best in Health, that appear'd firmest of Constitution; but we often perceive a quite different Scene; and nothing is more common, than to observe those who enjoy a Plenty of Nourishment, and abound with a great Corpulency, and, seemingly, obtain a healthful Countenance, to labour under a very infirm State of Health; which could not be so, if the Nerves were not nourish'd by a Fluid different from that which increases the Bulk and Constitution of the Parts.

WITHOUT all doubt, the fleshy Fibres are nourish'd by the Blood; but as it is divided into two Parts, a *Serum* and *Crassimentum*, the great Question is, *Which of those Parts yield the immediate Nourishment?* And that will easily be determin'd, if we consider, that the red fibrose Globules, that compose the *Crassimentum*, can never go to nourish the Parts, because, being the heaviest, they will always, in Motion, determine themselves to the Centre of the Vessels, and repel the *Serum*, or lightest Parts, to the Sides; so that the most serose Parts of the Blood will go to nourish the Body; and, for this Purpose, the *Serum* always consists of more minute Particles, which is continually suffering infinite Divisions from the contractile Power of the Vessels, till, at last, it is perfectly brought to a State of Viscidity fit to nourish the Parts; for the Blood is more or less viscid, as its Spheres more or less lose their Sphericity.

BUT as this Opinion is only conjectural, founded on the foregoing Reasoning, so I desire none to join Issue with me therein, but rather to pursue the Enquiry, and, if possible, find out a more clear Manner in explicating the Nature of Nutrition, that is, what Parts of the Blood disengage from the Mass, and go into the Nourishment of the Parts.

AND

AND thus I have finish'd this imperfect Sketch, of what I thought proper to offer concerning the Structure, Mechanism, Laws, Properties, and Motions of that System of Matter, that compose a human Body, and carry on the Actions of the Animal Oeconomy.

C H A P. VII.

Of the Balance of Nature, and several Degrees of Health.

THE Balance of Nature is that equal Temperature of the Solids and Fluids, wherein the Body enjoys the highest Perfection of Health, wherein the Blood is capable, from its Fineness and Fluidity, of passing the minutest Artery, wherein the several Secretions are made from the Blood in the exactest Proportions, wherein the different Excrements are excern'd without the least Obstruction. So that these Definitions of Health, that hitherto have been left us, seem not to me clearly enough form'd; for they cannot be said so well to be the Cause, as the Effects of a healthful Temperature, *viz.* A regular Performance of all the Actions of the Parts according to the Laws of Nature. Now, as the right Exercise of the Actions of all the Parts, depends on the Constitution of the Solids, preserving the due Mixture and Motion of the Fluids; more properly, therefore, may we define Health, *viz.* A right Exercise of the Actions of the Solids and Fluids, according to the Laws

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of Nature, whereby the Blood is maintain'd in its Circulation thro' the minutest Artery ; for if the Blood meets with any Resistance, there will be an **Oblstruction**, and consequently **Pain**; and Pain in any Part will impair the Action of that Part, and consequently create a Disease of that Part, or to which that Part is subject.

To this unobstructed Passage of the Blood is owing the highest Degrees of Health our Bodies can arrive at, is owing the regular Performance of the several Actions, is owing the natural Quantity of the Blood, as also its Motion and Fluidity, on which depends its natural Heat; and when these are all in Balance, or *Aequilibrium*, then it is, that the Body enjoys the highest State of Health; and the Blood will continue the Condition of both its natural Quantity and Fluidity, while the Vessels preserve their natural Springiness, and are capable of flinging off their several Excrements; and the Vessels will preserve their Springiness, or Contractile Powers, while they receive no Damages from the Non-naturals, the common Cause of all Order and Disorder in the Animal Oeconomy, as we shall most clearly demonstrate in the following Chapters.

BUT as the Balance of Nature is a State or Condition of Health rather to be desir'd than enjoy'd, it being scarce possible, that the Standard of Health, in frail Bodies like ours, subject to the Inclemencies of the Air, Errors in Diet, and a thousand other Accidents, should ever be mathematically exact, so is the highest State we can arrive at, several Degrees beneath a just Balance; and he that perceives himself perfectly at Ease, and endued with a sound Constitution, and pleasant Mind, has no Reason to quarrel with the Make and Frame of his Body, tho' both, sometimes, may

may suffer a Ruffle from the Alterations of the Weather, or Method of Diet, which the greatest Care, and most exact Circumspection, cannot always prevent.

THE several Degrees of Health, therefore, must depend on the original Principles of Life being more or less sound, which will give greater Vigour to the Solids, and of Consequence more or less enable them to divide the Blood, and bring the Fluids destin'd for Nutrition within the Sphere of Contact.

THE Constitution of the Body is, therefore, to be judg'd stronger or weaker, from the different Structure and Springiness of the Solids, and the Power they have to overcome the Fluids; for some robust Constitutions can better digest a good hearty Dinner of Beef, Pork, &c. than others, of a more weakly Texture of Body, can the Wing of a Chicken, or Leg of a Rabbit; and the Reason of this Difference, besides Habit, is, because the Fibres, that compose the muscular Coats of the Stomach, *Viscera*, and other Digestions, are stronger and more elastick in the one, than the other, whereon their Contractile Powers depend, and to which the Benefits of a good Digestion are chiefly owing.

NOW, in all natural Actions, there are certain Boundaries or Limits fix'd, by which we determine the several Degrees of Health. The grand Symptom of a healthful Body is a cheerful Mind, which results from the Body's being perfectly at Ease; but, such is the Misfortune of human Nature, that the very Powers lodg'd in the Solids for the Defence of Health, when over-strain'd or weaken'd, fail not to infer Death and Diseases; and so easily does Health slide, or as it were start into Diseases, that the Transition can hardly be

prevented whenever it comes to Extremes; for, from certain Experience, we observe, that the Extremes of Health border on Diseases of two kinds, Acute and Chronic; for when the Contractions of the Solids are in their Zenith of Perfection, the Fluids will be highly rarefied, and the Body enjoy the highest Satisfaction and Pleasure; but while they continue in this Elevation, any little Accident interfering, from a Disorder in any of the Non-naturals, will carry them above the regular Standard of Health, from whence the Blood suffering over-great Divisions, will be apt to obstruct in some of the minutest Canals, and raise a Disease that Part is incident to, which, in this Case is generally acute, of the Inflammatory kind, and attended with a Fever.

ON the contrary, the lowest Degree of Health, whose indelible Character is a low Spiritedness, depends on the Contraction of the Vessels depress'd a little beneath their natural Standard, which, from any Disorders of the Non-naturals, as in the former Case, will be apt to sink them beneath a healthful Temperature; under which Circumstances, the Fluids will attract each other, and form Diseases incident to those Parts liable to Obstructions, which, generally, in this State of the Solids, is a Chronic Indisposition, such as Vapours, Scurvy, &c.

BUT here I must beg leave to observe, that the Motion of the Fluids is ever in Obedience to the Contraction of the Vessels, and the Consent, Agreement, and *Æquilibrium* of those two distinct Masses of Matter, are preserv'd under all the several Degrees of Health, and that no Diseases can invade the Body, but what must first disorder the Solids, by raising or depressing their Contractions above or beneath the Balance of Nature.

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THIS I could not but here take Notice of; because of late we have had Talk, from a Person most justly reverenc'd for his high Character, and the great Services he has done in the Phisical Way, I mean the most learned Boerhaave, of Diseases of the most simple Fibres, of the Organs of the Parts, and of the Humours or different Fluids.

Now if any one will observe the Diseases of a Fibre, he cannot conceive it to arise from any other Origin than an Obstruction of the Juices in the Canal, which, too much distending its Membranes, puts it to Pain; but there could be no Obstruction, and consequently Pain, if the Humour was not too much divided; and the Humour can never be too much divided, so long as the Fibre can maintain its contractile Motion within the Standard of Health: It is, therefore, from the Fibre's being over-inform'd with Motion, that causes an over-great Division of the Fluid, and consequently renders it liable to Obstruction. And the same Disorder will attend the Fibre, if it want Motion sufficiently to maintain its Contractile Powers; for then the Fluids will be apt to grow viscid, and form preternatural Cohesions.

So if we go on to consider the Diseases of any Organs, take it in the Stone or Gravel, or what else you please, we shall perceive, that no Sand or Gravel can be generated, while the Action of the emulgent Artery is strong enough to preserve the Fluids from Cohesions, as they are secreted by the renal Glands; but if the Artery be subject to a Languor, it will then beat but faintly, and the Fluids grow viscid, and be apt to cohere; from which Cohesions, preternaturally affecting the Kidneys, Stones, Gravel, and other hard Bodies, are generated.

A New THEORY of

B U T before I close this Chapter, I must beg leave to take Notice, of the Manner how the Ancients treated this Subject: They distinguish'd the several Constitutions by the Names of the *Sanguine*, *Biliose*, *Phlegmatic*, and *Melancholy* Temperatures; and these are the several Habits of the Body, and very much depend upon our Manner of living; and as any of these Humours did prevail in the natural Constitution of the Blood, so the Persons were said to be of a *Sanguine*, *Biliose*, &c.

B U T these are only Temperatures depending on the different Degrees of Contraction of the Vessels; and therefore here I shall only take Notice of the *Sanguine* and *Phlegmatic*, and comprehend the other two under those general Heads. As the *Sanguine* or *Biliose* are subject to Fevers, Inflammations, and other acute Diseases, so we perceive that the *Phlegmatick* are incident to the Rickets, King's Evil, Strumose Swellings; and young Virgins of this Complexion, are incident to the *Febris Albus*, Cachexy, &c. And these are the predisposing Symptoms, that give Notice what Disease the Habit is subject to.

T H U S far we have enquired into the Balance of Nature, and several Degrees of Health, and examined upon what Principles they depend; and it evidently appears, from the Arguments and Reasonings of the foregoing Discourses, and from the Observations we have made in this Chapter, that Nature has given a just Standard to both the Solids and Fluids, a Balance or *Aequilibrium* to the Blood-Vessels and Humours, a regular Flux and Reflux to and from the Heart, for the Nourishment of every the minutest Fibre.

N O W so long as the Solids preserve their due Tone and Vigour, so long will the Fluids obey their

their Directions, so long will the Body enjoy Health and Tranquility, so long will all the Faculties exert their proper Springs for the Well-being of the Machine, so long will the regular Order of the Animal Oeconomy be supported, and Pleasure and Satisfaction accrue to all the Senses, and Strength, Vigour, and Agility to all the Body; and a System of Matter and Motion thus dispos'd, we denominate *healthful*.

C H A P. VIII.

Of hereditary Intemperatures, and contracted ill Habits of Health.

IN the former Chapter we have defin'd Health to result from a right Exercise of the Solids and Fluids according to the Laws of Nature; and the more exact the *Equilibrium* is between those distinct Masses, the higher Degrees of Health does the Body enjoy.

A DISEASE, therefore, will arise in all Cases where the natural Actions of the Solids and Fluids are perverted in their Motions, either above or beneath the Balance of Nature, that is, whenever they are strain'd above or beneath that Line of Direction, that constitutes the Standard of Health.

Now in Order more clearly to discover, how a Body declines from a sound State of Health into a morbid Indisposition, or how a Body changes from better to worse, we must consider that as Pleasure is the grand Symptom of a sound Constitution,

stitution, and argues the highest Degrees of Health, when it is compleat ; so Pain, and its several Degrees, is that Condition of Body, that indicates all Diseases, and Uneasiness being the lowest Degree of Pain, in that, I think, consists the Nature and Essence of that Disorder we call the Vapours, or *Hypocondria* ; for they have no material distinctive Characters, but what arise from the same Disease affecting different Sexes, and the Vapours in Women are term'd the *Hypocondria* in Men, and they proceed from the Contraction of the Vessels being deppress'd a little beneath the Balance of Nature, and the Relaxation of the Nerves at the same Time, which creates that Uneasiness and Melancholy that naturally attends Vapours, and which generally is an Intemperature of the whole Body, proceeding from a Depression of the Solids beneath the Balance of Nature ; but the Intemperature of the Parts is that peculiar Disposition whereby they favour any Disease,

THE Ancients had their different Intemperatures almost for every Part of the Body ; their hot and cold Intemperatures of the Liver, Spleen, Kidneys, Lungs, Brain, &c. But these Indispositions were all depending on the Contraction of the Solids, elevated or deppress'd above or beneath the Balance of Nature ; and the hot Intemperature was inseparable to those Constitutions, where the Vessels were above the Balance, as the Cold was certain to seize those in whom they were beneath : And all these only proceeded from a quicker or slower Circulation of the Fluids, which altered the natural Secretions, and of Consequence created those hot and cold Intemperatures their Bodies were subject to.

ALL Intemperatures, therefore, that one Body suffers more than another, must arise from the different Indisposition of the Parts, whether hereditary, or contracted in Time from vicious Habits. From these two Sources arise all those Intemperatures that affect our Constitutions, all those Diseases that affect our Bodies, which sooner are dispos'd to fall on one Part than another, as those Parts are originally weaker, the Vessels straiter, and the Part or Parts more dispos'd to receive the Impression; for in all Cases where Diseases invade the Body, there must be a Disposition to, before there can be a Generation of a Disease; and this Disposition favouring Diseases, if it is not contracted in Time from vicious Habits, must depend on the first Principles of Life; for if either of the Parents were subject to any Disease, or Indisposition, that render'd the *Animalcula*, fitted for Conception, effete or languid, it will go near to fix a Taint on the yet unform'd *Embryo*, that will sooner or later dispose the future Infant, either to receive the very same Affection, or something not very unlike it, that may cause the Child to be weakly, infirm, and subject to Ailments all its Life-time; and this appears most in Ricketty Children, and others subject to the Evil, and other Indispositions we mention'd in the last Chapter.

BUT the Reason why those hereditary Taints do not so often seize upon young Children, is, because their Juices are smoother, and their Vessels more yielding, which give that Flexibility and Softness to all the Parts; but after they come to make use of a grosser Nourishment, the Contractions of the Solids are augmented, the Division of the Fluids encreas'd, and consequently render'd sharper, which must disaffect those Parts, naturally

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weaker than others, from those hereditary Indispositions we contract from our Parents: And this is the Reason why the Gout and other Diseases may be said to be hereditary, tho' they appear not immediately after our Birth.

AND thus we have consider'd the predisposing Symptoms, that indicate the Diseases our Natures are inclinable to, whenever the Non-naturals annoy us, of which we shall treat in the following Chapters.

C H A P. IX.*Of the first and most remote Causes of Diseases.*

In the former Chapters we have most clearly prov'd, that these Bodies of ours are a Compound of Solids and Fluids, and that there is no Part, or Particle of Matter in the Composition, that does not come under the Power or Influence of one of these Denominations; and they are so peculiarly adapted, in their natural State, to the mutual Support of each other's Actions, and to answer the great Ends of Nature, in carrying on the Laws of the Animal Oeconomy, that, unless disturb'd by foreign Agents, never can they, of themselves, fall into preternatural Cohesions, Disorders, and Affects; so that, instead of being daily harrass'd with Diseases, we have much more Reason to wonder, that we live not the Age of the ancient Patriarchs; for if the Mouth receives nothing but what is fitting, as to the Nature, Quality,

Quality, and Quantity of the Aliment; Mastication will be perform'd regularly, the *Saliva* will mix with it, and the Stomach will perform its Offices of Maceration, Digestion, and Expulsion of the Chyle: The Pancreatic Juice, *Lympha*, and Bile are all fitted for their several Offices of Separation, Attenuation, and Dilution, without any supposed Fermentations to disturb, vitiate, or embarrass its Progress. Nor does the Blood quarrel with the well-prepared Chyle, but amicably receives it from the *Ductus Thoracicus* into the Sub-clavian Vein, where they first meet, and march directly to the Heart, by whose *Systole* they are driven into every Part of the Body for its Support and Nourishment.

Now as the Humours can no Way fall into Disorders among themselves, so I very much question, whether any thing in Nature is left to discompose a well-settl'd Frame of Health, besides the Shocks it receives from the Non-naturals, which brings us to consider their Nature and Influence on human Bodies.

THEY are six in Number: The *Air*, *Meat*, *Drink*, *Exercise*, *Rest*, and the *Passions*. The Air, as it stands in the Front of the Non-naturals, and is of such extraordinary Use in supporting human Nature, claims our first Consideration: But before I enter into the Reasons of its Influence upon the Constitution, and the Changes it makes in our Bodies, it will not be improper, if I first enquire a little into the primary Qualities that constitute its Essence, and endeavour to discover what makes it, what it is to us, and what gives it those Changes and different Qualities, with which we perceive it to affect our Constitutions.

IF we examine accurately into the Nature and *Nature of the Air*, we shall find it to be nothing

thing but the *Aether* of our Atmosphere, impregnated with a due Quantity of Nitre and Sulphur, and as the Nitre more or less prevails, so is the Elasticity or Spring of the Air stronger or weaker, so is its Effects on the Body colder or warmer; not, to speak properly, that the Air contains any hot or cold Qualities, but only a Power of producing those Sensations in us, by a different *Stimulus* it at different Seasons impresses on the Body; and the greater or lesser Degrees of what we vulgarly call Heat or Cold, arises as either of those Qualities govern each other; for Cold is nothing but the Absence of the Sun's Heat, whereby the Sulphur of the Air is carried off from the Atmosphere, by the Repulsion of the Nitre. Heat is chiefly owing to the Presence of the Sun's Influence banishing the Nitre from the lower Region. Indeed, I deny not, but that the Influence of the Winds from different Corners, in different Seasons, shall greatly change the Properties of the Air; and sometimes I have observ'd the sulphurous Mists to arise from the Earth in such vast Fogs, as to expell the Nitre from our lower Region and banish Cold, even in the coldest Seasons, so that Frost or Ice arises from the Nitre of the Air crystallizing the Spheres of Water, whereby its Fluidity is hinder'd; for in an extreme cold, frosty Night, I have observ'd those Crystals shoot upon the Water, just as Cream will arise upon new Milk after it is boil'd, and taken off the Fire.

AND Snow I take to be only the Attraction of an infinite Number of Nitrous Particles in a crowded Atmosphere, which joining in little Flakes or *Lamina's*, gravitates towards the Earth.

HAIL is a Condensation of the same Nitrous Particles into little spherical Bodies, which have the same Cause of falling.

ALL the foresaid Phænomena are composed of the same Matter, which, we have the greatest Reason to believe, is rais'd from the Sea, and chymically subtiliz'd in the superior Regions, and falls, in different Countries, according to the Variety of Seasons, and is only an Alteration in the Figure and Motion of the Particles that compose those different Qualities of Ice, Snow, Hail, and Rain; for we never scarce perceive it to snow, till the Air is excessively crowded with Nitrous Particles, that is, excessively cold; and after a good Fall of Snow, that is, after a good Quantity of Nitre is expended, we sensibly perceive it to grow warmer.

THUS far as to the Constitution of this Element. But, in discoursing of the Nature of the Air, and its Influence in producing Diseases, we are to consider, that it can produce no Variations in our Bodies, but what must arise from its different Gravities, and as the Air changes its Spring, upon which its different Gravities depend; so will the Laws, Motions, and Vibrations of both Solids and Fluids in an animal Body vary.

THESE are two Extremes in the Air, which are chiefly concern'd in exciting the Phænomena of Diseases, and these are, an excessive Cold, or excessive hot Intemperature; and the several under Degrees of Heat and Cold, being only the different lesser Affections of those Extremes, till they arrive at a just Balance or Temperature, we shall comprehend all those lesser Variations under the general Terms of the former Extremes, because the Quicksilver in the Barometer, under both, is buoy'd up to the same Height.

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AN excessive cold Air, as always attends frosty Seasons, tho' excellently well agreeing with the Robust, yet, in weakly and infirm Constitutions, is it apt to raise the Contractions of the Vessels above the Balance of Nature, whereby the Blood suffers too great Divisions, which renders it liable to obstruct in the Capillary Arteries, from whence those Inflammatory Fevers arise, that so constantly attend People in hard Frosts, which are of different Names and Natures, according to the different Parts they affect; so that if the Obstruction happen in the *Pleura*, it will assume the Name of a Pleurisy; and from the fine Vessels of the Lungs obstructing, arises that Disease we call a Peripneumony; and if the Inflammation tend to the Face, and swell all the adjacent Parts, we call it a St. *Anthony's Fire*; and so of a Quinsy, from an Inflammation of the Tonsils and Glands of the Throat; all the foregoing Diseases having constantly a Fever attending them.

ON the contrary, a hot, sulphurous Air is apt to elevate the Contraction of the Solids extremely, and by its fiery Particles to disturb, vitiate, and embarrass the Actions of Nature to the last Degree; from this Origin, besides those Inflammatory Fevers I took Notice of before, arise those Petechyal, as also those Nervose, Epidemic, and, as some will have them, Malignant Fevers, that so frequently attend about the Months of *July* and *August*, as also that Fatality of the Small Pox, so rife about those Times.

BUT highly different from those two Intemperatures are those dampy, moist, foggy Seasons, (a kind of Weather that always attends the dawning Spring) which too much relaxes the Vessels, and by that means impairs their Contractions, upon which they sink beneath the Balance of Nature,

ture, and are unable any longer to preserve the Fluids from preternatural Cohesions, that begin to affect the several Parts with Scorbutic Swellings, Schirrofities of the Liver and Spleen, the *Hypocondria*, obstinate stubborn Coughs, that not seldom fall on the Lungs, and excite a *Phtisis*. And to this State of the Air is owing all those Vernal and Autumnal Agues, and Intermittent Fevers that about those Seasons so generally pester Mankind.

THE next most necessary of the Non-naturals of *our A-
ments*. are our Aliments, or those things we take for the Nourishment of our Bodies. For this end, Nature has implanted in all living Creatures, the two natural Appetites of Hunger and Thirst, whereby they are excited to covet and desire such things, as may serve to recruit those Wastes that are daily expended in carrying on the Actions of Life; and for this Purpose has indulgent Nature fitted certain Receptacles and Canals, as well to prepare this Food of Life, as to convey it into the Blood; for such is the Frame and Make of our Constitution, that, without those daily Supplies, these Bodies of ours would fade, die, and turn to their primitive Chaos. And tho' several Authors of no mean Credit have taken a great deal of Pains to tell us, what Qualities they are in our Aliments that most annoy us, and give the greatest Disturbance to Nature; yet I very much question, after the best Enquiry I have been able to make, whether they can any other Way affect us, than by a gluttonous Surcharge; for as to the Qualities of Meats and Drinks, be they what they will, if the Action of the Stomach be tight, and the Motion of the Vessels firm, and able to overcome those noxious Properties, no Hurt nor Damage can happen to the Constitution; for we daily

daily observe, that many things shall offend one Person, that no ways shall be disagreeable to another ; nay, that, by a different Person, shall be eat with Advantage to the Constitution ; and no Reason can be assign'd why it should not equally offend the latter with the former, but that his Stomach was able to subdue those Qualities in the Aliment, that prov'd noxious to the other ; so that in such Cases People must first judge, and by After-Experience determine, what will, and what will not, favour their Constitutions.

INDEED, your high-season'd Meats, rich Sauces, and Plenty of strong-spirited Wines, are apt to heighten the Contractions of the Vessels above their proper Standard, upon which the Fluids will be greatly divided, and distract the Canals, and by this means subject the Body frequently to encounter Inflammatory and very Acute Diseases. A continual Glut of Juice also being charg'd upon the Blood, will over-balance the Contractions of the Solids, and in Time ruin their Tone and Texture, and thenceforwards the Fluids will attract each other, and form preternatural Cohesions little favouring the Intentions of Nature.

AND from this Origin spring all those Chronic Diseases, such as the Asthma, Dropfy, Gout, and their several Complications, that most are pester'd with, that in their Youth have liberally indulg'd themselves in the Use of Wine, Women, and High Feeding, the Sword and Plague having not destroy'd more Mortals than those Vices, when indulg'd to Extremes.

THERE is an old Maxim I must beg leave to take Notice of, before I dismiss this Subject, and which obtains very much with most People, viz. That it is a Sign of a sound Constitution,

if

if the extreme Parts feel a little chill'd, after a full Meal; but, in my Opinion, nothing less, for the Reason of this Chilness is, that the Fibres of the Stomach, being not strong enough to digest the Aliment, demand greater Quantities of Animal Spirits to influence their Action, by which other Parts will be defrauded; and, in such Cases, those Parts will be most defrauded, that are either weakest, or most remote from the Centre of Heat, and these are the Limbs and Surface of the Body.

THEY that first marshall'd the Non-naturals, of Exercise, in the Order we receive them, doubtless had an extensive Thought; for having obtain'd the Benefit of Air to sustain Life, and Aliment to continue it, we come now to Exercise, by which this Aliment might be more commodiously digested, and a Distribution better made to every Part, for its Support and Nourishment; for without Exercise the Body would suffer a continual *Languor*.

BUT tho' the Benefits that accrue to the Body from Exercise, are really great, and highly advantageous; yet whenever it is excessive, over-violent, or unseasonably us'd, it fails not to infer great Damages to the Constitution.

ALL excessive Exercise in weakly, infirm People, greatly impairs the Constitution, and is apt to overstrain the Solids, and on a full Stomach is still worse; for then it raises Flushings, and, instead of a good Digestion, causes Flatulencies, and a *Languor* upon the Nerves and Spirits.

IN hot, sanguine, biliose Constitutions, it is apt to excite Fevers, Pleurisies, and other inflammatory Diseases; and all violent Exercises, as Vaulting, Leaping, or Jumping, are apt to cause a Rupture of the Vessels, and Spitting of Blood,

which Symptoms are not very easily remedied, in those that are any Way's inclinable to Decays, Wastes and Consumptions.

THE opposite Extreme to Exercise, is Idleness, or too great Indulgence to Rest, which is not only follow'd with as bad Disorders, but very often worse Consequences; for, such is the Frame and Texture of a human Body, that, unless assist'd by exterior Agents, all its Actions will flag, and lose their natural Vigour; and as most acute Diseases may arise from Exercise, informing the Solids above the Balance of Nature, so want of Exercise or Motion, not only nourishes an impure *Colluvies*, by depressing the Solids beneath their proper Standard, but it obstructs the Reduction of the Humours. Besides, too much Indulgence to Sloth and Ease creates an Effeminacy, excites the Passions, and makes us Slaves to our Appetites; and once we arise to that height of Indolence, as to govern our Reason by Appetite, it's impossible to conceive into what Disorders it will hurry us; for as the Constitution is vascular, and those Vessels compos'd of Fibres that have a Contractile and Distractile Power; so those Powers, on which the Reduction of their contain'd Juices entirely depend, are greatly restor'd or depress'd, as Exercise is more or less intended or remitted; so that much Ease and Sloth may be said to be the Bane of the Constitution, since it will create a Laxness and *Languor* in all the Parts, and of Consequence subject the Body to Chronical Head Aches, Vapours, Histeric Fits, Melancholy, &c. which we, generally, perceive to affect Ladies of a fine and delicate Constitution, that, for any considerable Time, have indulg'd a Sedentary Life.

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BUT there are different Kinds of Exercise and Rest, from those I have been speaking of, *viz.* Sleep and Watching; they affect the Senses in the same manner, as Rest and Motion do the Body. As the continual Exercise of our Senses, and Intensity of our Thoughts, infest a Waste of the Constitution, without any Possibility of Redress; therefore has Nature provided a Remedy for those Expences, by inclining the Body to Rest, and obstructing the Exercise of all the Senses; for Sleep, as Aristotle has rightly defin'd it, is *Quies quadam & privatio Vigilarum sive Exercitii sensuum*, or an Absence from Watching; but as Sleep and Watching are contrary Qualities, so do they infer distinct Operations, and, therefore, are distinctly to be consider'd.

SLEEP is a Quality, whereby the Body receives fresh Supplies for recruiting those Wastes, that are expended in carrying on the Animal Actions of the Day; and we find, by Experience, that the more wearied we lie down to rest, provided that Weariness was not above the Strength of the Constitution, the Sweeter are the Slumbers of the Night, and the more refresh'd do we arise the next Morning. But, if, from the Pleasure and Advantage of regular Sleeps, we indulge to Extremes, then shall we most certainly find them pernicious to our Constitutions; for too much Indulgence this Way impairs the Solids, and renders all their Actions effete and languid; so that if there be a Disposition favouring any Chronic Disease, this overgreat Indulgence to Sleep will be a Means to confirm it, for it relaxes the Tone of the Nerves, damps the Motion of the Animal Spirits, and creates Vapours, the Scurvy, Cachexy, with a universal Waste of the whole Body.

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ON the contrary, Watching, if it interrupt those sweet Slumbers, so refreshing to Nature, must cause very great Disorders in the Animal Oeconomy; for as Sleep chears the Body, restores the Spirits, and nourishes the Constitution, when regular; so long Watching depresses its Actions, consumes the Spirits, and destroys the Constitution; and tho' both these Affections of Sleep and Watching are attended with Inconveniences, yet that of long Watching is much the more dangerous; for besides the Decays and Wastes of the Constitution, which inseparably attend too much Watchfulness, Deliriums, Phren-sies, and Madness itself, are very often the fatal Consequences of this disturbing Passion, besides the Horror, that must naturally attend those, that are oblig'd to watch whole Nights, without being able so much as to close their Eyes.

of the Passions. **T**HE Passions of the Mind are the last of the Non-naturals that demand our Attention, and that deservedly, since their Exercise come not in Play, till after all the others have done their Duty. Now, if we attentively consider what it is, that immediately directs and governs all the Actions of our Bodies, next the Will, it is our Passions; and these I call the Medium that conjoins Matter and Thought, and so far as the Passions reach, so far is purely mechanical; but in tracing further up into the Understanding, we are lost in a Maze, and bewilder'd in dark Obscurity.

OUR Passions are necessary Beings, and result from the Mind, as the Rays of Light dart from the Sun, and, when well or ill govern'd, become the several Virtues or Vices that spur us on to good or bad Actions: But the best Way to judge of the Passion, is to consider the Influence

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they have on the Body, and the Alterations they make in the Blood and Juices.

W H A T E V E R affecteth either the Mind or the Body, will raise or depress the Passions, according as the Object affecting, is more or less agreeable, or disagreeable. Thus all pleasing Cordials raise agreeable Sensations, as also pleasing Objects, that enter by any of the Senses. And hence it is, that fine Women, melodious Musick, and agreeable Odours, charm the Imagination, and induce a Pleasingness on all the Passions; but, if they happen to be excessively pleasing, they then overheat the Passions, and unhinge the Constitution; they create inflammatory Fevers, Phrenesies, Madnesses, and, sometimes, from the Vessels being extremely heighten'd in their Contractions, sudden Death.

ON the contrary, all disagreeable Objects damp the Passions, depress the Spirits, and affect the circulating Fluids. Grief, Anguish, and Sorrow, Disappointments, Cares, and Losses, have all the same Influence in generating Diseases, and they comprehend most of the Evils that can assault the Constitution, from which Fountain spring the Vapours, Spleen, and Melancholy, which not seldom terminate in Wastes, Decays, and Consumptions, from the daily wearing out the Body, by continual Stress of Thought.

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CHAPTER **F**₃ **more easily see the Chinese of**

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C H A P. X.
Of the proximate Cause of Diseases.

V E R Y Disease that invades our Bodies, has three Causes, evidently di-

stinct, to produce it.
THE first is the procatartic or re-

move Cause depending on the Non-na-

naturals, and of which we have copiously enlarg'd
in the last Chapter.

THE second is the proximate or middle Cause,
proceeding from a partial Evacuation of any of
the Excreta; that is, when any of the Evacua-

tions are either above or beneath the Balance of
Nature; that is, that I may express my self in
Terms as little liable to Exception as possible,
when all the Discharges by the Evacuations are great-

er or lesser, than may well stand with the natural
Constitution of the Body in Health; for, in all
Cases, the Non-naturals must first disorder some

of the Evacuations, which is the first Cause of
Diseases; and then those Evacuations must affect
the Blood and other Juices, which is evidently
the second Cause, and the Blood and Juices thus
affected, will not fail to disturb the Action of
the Parts, which is the last and immediate Cause
of a Disease, and in which consists the Nature of
all Diseases.

WITH this View it was, I took the *Excreta*
from the rest of the Non-naturals, and plac'd
them here in a separate Chapter by themselves,
that we might, more clearly, see the Chain of
Causes

Causes that disturb, vitiate, and disorder our Bodies with Diseases ; for none of the Evacuations will be irregular, if the Air, our Aliment, or some other of the Non-naturals do not disaffect 'em.

It will therefore be worth our Pains to observe the orderly Progress Nature takes, in flinging off the *Excreta*, which are the several Secretions our Aliment affords, before it comes to be a Part of the Constitution ; and tho' the Eyes, the Ears, the Nose, all afford their several *Excreta*, yet, as they only affect those Parts they belong to, we shall discard their Examination, and only attend to the following, viz. the *Feces* of our Bowels, Urine, the Excrement of Sweat and Perspiration, the Menses and Recrement of the Seed ; and tho' there are several Recrements secreted in the Body, as the Bile, Pancreatic Juice, &c. yet all these are dependent on some of the foreaid Evacuations ; and without deviating from their natural Standard, that is, unless they be intended or remitted, it is impossible any Disease should invade the Body.

AFTER our Aliments have been well digest-ed, and turn'd into the Intestines, the more fine Fluids take their Progress for the Support of the animal Oeconomy, while the grosser *Feces* are detach'd by the *Anus*, which Passage Nature has ordain'd as a common Shore to the Body.

THE natural Consistence of the Excrements ought to be figur'd, not hard, soft, not fluid.

Now the Quickness or Slowness of their natural Descent or Motion, is in Proportion to the natural *Stimulus* of the Bowels, which excites the contractile Powers of their Fibres, whereon their Peristaltic Motion depends, and the *Stimulus* that excites that Motion is the Bile ; so that whenever the Bile is any Ways more than naturally sharp-

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en'd, it will produce a *Stimulus*, that will excite the Contractions of the Bowels above the Balance of Nature; upon which the Excrements will be too much divided, and turn'd off by Stool, both too quick, too fluid, and in too large Quantities, which must in Time bring on Decays, Wastes, and Consumptions.

N O R are the Consequences from their Suppression less pernicious, for then they create great Heats, with Flushings in the Face, and intolerable Head Aches; and if they continue obstinate for any Time, they fail not to excite inflammatory Fevers, Pleurisies, &c. which sometimes terminate in Deliriums, Phrenesies, and Melancholy.

W H E N the Chyle has left the Excrements, it passes on to the Blood, where the urinous Fluid is secreted and digested off by the Kidneys, and this is call'd its second Depuration; but if the emulgent Artery be effete and languid, it will suffer the urinary Particles to attract each other in their Passage, from whence arise the Gravel, Stone, Strangury, and other Affections, to which those Bowels are subject.

F R O M the Beating of the Heart, and Contraction of the Vessels, the Chyle receives a greater Exaltation, and more intimate Union with the Blood; and when, by repeated Circulations, it is advanc'd to a Juice high enough to nourish the Body, it yields an Excrement call'd Perspiration, which is the last Digestion the Blood undergoes, before it closes with the Parts for Nourishment.

T H I S perspirable Matter is cast off from every Part of the Body, by a vibratory Motion of the cutaneous Glands, depending on the Contraction of the Arteries, which are intended or remitted from the Impulse of the Heart; but so subtle

subtle is this *Humus*, every where exhaling from the Surface of the Skin, as not to be perceiv'd by the most curious Microscopes.

THIS Evacuation is by far the greatest of any in the Body; and equals, if not exceeds all the rest in the Quantity of Matter expended: When it is free and unobstructed, it generally denotes a sound Constitution, and vigorous State of Health, and whenever suppress'd, which, from various Causes may happen, it fails not to create a Variety of Diseases.

FROM this Origin arise most of those Diseases we call Acute; and to this Head may be reduc'd inflammatory Fevers, attended with acute Pains, such as the Pleurisy, Peripneumony, Rheumatism, Cholic Pains, Coughs, Colds, Defluxions of Rheum upon the Eyes, Nose, and Palate, with severe Pains of the Head.

THE same Glands that afford this perspirable Matter, also furnishes the Matter of Transpiration or Sweat; for however some have suppos'd those two Evacuations to issue from different Glands, yet upon a more narrow Scrutiny, they will appear to be mistaken, for, to me, they appear the same Glands with a different Spring; and, that, while the cutaneous Glands preserve their due Tensity and Firmness, they admit nothing but the fine perspirable Matter to issue from their Orifices; but, if by Violence they be any Ways strain'd, or have their Spring relax'd, then their Orifices will widen, and instead of the natural perspirable Matter, a moist Dew, or sometimes, in great Weaknesses, a clammy Matter or Sweat will arise almost every where upon the Surface of the Body.

So that a plentiful Perspiration must be a Mark of a sound State of Health; that is, it must argue

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argue the State of the Solids firm, tight, and vigorous; for the Glands, every where, being the Convolutions of the Extremities of the Vessels, must obtain the same Springiness the Solids enjoy, from which they are deriv'd.

ON the contrary, a large Discharge of Sweat, without Motion, signifies a great Weakness of Constitution, and, that the Motion of the Solids is beneath the Balance of Nature. I have sometimes observ'd, in weakly Bodies, where a plentiful Breathing has been unskillfully rais'd, such Ravages made upon the Fluids, as could never after be repair'd, but a plentiful Discharge has attended the Patient to his dying Hour.

THUS far we have only examin'd the *Excreta*, that result from the natural Course of our Aliment, till it assume the Nature of Nourishment. But then, there are other Evacuations, that have no Dependance on our Diet, but appear in Time, sooner or later, according to the different Temperatures of Bodies, and these are two; the *Mensum Profluvium*, and *Profusio Seminis*. Those two Evacuations give great Changes to the Constitutions of both Sexes.

WOMEN about the Age of Puberty, are most sensibly affected: Their *Menses* break forth, their Breasts swell, and Desires arise.

BUT the Cause of those Periodical Eruptions, tho' the Subject of various Pens, yet seem not to me clearly enough ascertain'd. Dr. Freind, of all that have handl'd this Point, most clear in his Explications, supports the Hypothesis of the *Catamenia*, upon the Existence of a *Plethora*, greater than the Vessels can dispense, as the Cause of their periodical Eruptions; but then his Way of accounting for a *Plethora*, in my Opinion, is not over clear; for all the natural Secretions are equally

qually the same in Women as Men, and if they perspire less, upon which that Gentleman grounds the Reason of his *Plethora*, their Quantity of Aliment is generally less, and the Meats they feed on not so gross as what most Men use for their Diet; besides, Women of a lively, brisk Disposition, who perspire most, have 'em, generally, much in larger Quantities, and more sound, than weakly, infirm Persons, who by Experience are known to perspire least. Therefore this Eruption can, by no Means, proceed from a *Plethora*, arising from a lessen'd Perspiration; or, at least, a lessen'd Perspiration cannot always be assign'd as the genuine Cause of the Menstrual Flux.

THAT there is an additional Load cast off by the Uterine Vessels, in the Times of Menstruation, I think, no Body will deny; and that this additional Load proceeds from a *Plethora*, is most certain; but how this Load comes to exist in the Body, is the great Question. This put me upon enquiring more accurately into the Structure of the Womb, and the Nature of its Vessels, and the Hypogastric Arteries, I perceiv'd, terminating their most numerous Divisions in the *Vicus*.

THE Office of the Arteries being to divide the Blood, it will take up more or less Space, as it is more or less divided; and if there be an additional Number of Arteries inserted into the Womb (which seem suited for no other End than to let out this Flux) then there will be an additional Division, which, in Time, will cause that additional Quantity, that constitutes this learned Gentleman's *Plethora*: And tho' the Quantiry of one Day's Division is but small, yet the Accumulation of thirty constitutes that real Quantity that Women part with during the Times of Menstruation,

struation, which is from nine, twelve, to fifteen or upwards of Ounces in some, tho', in their first Appearance, the Quantity is much less than what I have here taken Notice of.

NATURE seems to have constituted those Arteries, so numerous in their Insertions into the Womb, that the Increase of the Quantity, from the Division of the Blood, might not disturb the Action of any principal Organ, which it might have done, had this Division happen'd nearer the Centre of Heat; but here it has Time to abate that intestine Motion that arises from its Division in its Return by the Veins.

I K N O W it will be objected, that this *Plethora* ought as well to happen in the Time of Infancy or Childhood, as in the Times of Puberty: But to this the Answer is at hand; That those Uterine Vessels never unfold themselves in our Climate, so as to effect the Cause of Menstruation, till the twelfth, thirteenth, or fourteenth Year, and in some later. I could illustrate this Point still more clearly, from the Nature of those Medicines we generally prescribe, where this Flux is deficient, but the intended Brevity of this Discourse will not suffer me to run into further Diversions.

THOSE Fluxes are of mighty Consequence in the future Health of the Body, as they, monthly, succeed in the Party, after they have once appear'd; for, if at any Time, after their first Appearance, they dodge or stagnate, they fail not to create great Disorders, causing Fevers, Convulsions, and the severest Symptoms of Histeric Fits, which made the Ancients imagine, that there was contain'd in the Matter of the Menstruals, something of a poisonous Ferment, altho' nothing less; for it appears

pears as pure florid Blood, as in any part of the Body, especially in sound Constitutions.

NOR is its immoderate Discharge attended with Symptoms less grievous, for it drains the Body of its proper Juices, and makes the Countenance to look pale, thin, and ghastly; and if it continue for any Time, it will infer Decays, Wastes, and Atrophical Consumptions: For this Observation I have constantly made, and never, as I remember, perceiv'd it once to fail me, that all Consumptions that seize the Body from an Obstruction of any of the Evacuations, are of the Phthisical Kind; while those that proceed from an over large Discharge, are generally Atrophical.

PROFUSA Seminis Emissio vel defecta, is the last of the Evacuations I am to speak to; and I need not recount the destructive Miseries that attend Mankind, from the liberal Pursuit of this Brutal Lust. The daily Martyrs, not to say Sacrifices, Men make of themselves, too notoriously proclaim the Power of this headstrong and ungovernable Passion.

REASON, which ought to guide and direct us in all the important Steps of Life, is never less obey'd, nor more surprizingly puzzled, than when she endeavours to encounter the impetuous Motions of Venery.

THIS Oestrus, in all Ages, has fool'd the wisest Heads, and baffl'd the severest Virtues, so that the Wisdom of Solomon, the Holiness of David, and the Strength of Sampson, were no sure Fences in warding off the Sallies of this outrageous Passion; for Chastity, as a learned Father of the Church terms it, is a kind of Martyrdom, or *Martyrium sine Sanguine*.

INDEED,

INDEED, Conversation with a fine Woman gives the highest Flight to the Spirits, and is the greatest Cordial in Nature. In Venereal Pleasures the Action is struck with a most pleasing Sensation upon all the Passions, which heightens the Motion of the Spirits, and sends agreeable Sensations into every Nerve and Fibre of the Body.

IN such pleasing Scenes, all Nature is in Ferment: The Blood boils, the Pulse flutters, and the very Imagination is ravish'd with Extasy. But as such dainty Morsels are very great in their Consequence, if too often repeated; so, if we would enjoy a sound State of Health, and preserve a vigorous old Age, should we but seldom taste such delicious Viands: For those Wrenches and Sprains of the Back, that very often attend the unhappy Patient to his Grave, proceed from no other Cause, than an Extension of the Muscles, serving the Action of that Part, beyond what their Contractile Powers can restore; and, in this, lies the Fate of a broken Constitution, that the Contractile Force of the Muscles is either lost or greatly impair'd, which brings on those Weaknesses, Impotencies and Gleets, more difficult to cure, as well as more wasting to the Constitution, than those that proceed from Venereal Taints.

HOW miserable are they that waste their Estates, their Healths, and contract Diseases, that very often stand by 'em to the latest Period of Life! Not to mention the worser Consequences that often become hereditary in their Families, and which scarce could be believ'd, were not the Evils too visible, in these Times, to need any Proof.

NOR is the overlong Retention of this *Balsamum humani generis* of less pernicious Consequence; for, as it abounds with Plenty of Animal

mal Spirits, so is it apt to fire the Blood, and disorder all Nature, if not timely evacuated; for loading the Blood with acrid Particles, it stimulates the Vessels, and raises their Contractions above the Balance of Nature, from whence spring spermatic Fevers, Pleurisies, Inflammations of the Lungs, and if it continues any considerable Time suppress'd, will ascend the Head, and attack the Brain with desperate Head-Aches, Deliriums, Phrenesies, and sometimes Madness.

BUT as this is an Indisposition that will not frequently happen, for the Freedoms of the Age, and the Encouragements Youth have to Lewdness, will prevent any Disorders that may arise on this Head; so the great Danger we are to guard against, is, lest from Excess of Passion, he debauch and enervate the Constitution, and bring on Decays and Wastes that may destroy his Life, without the Assistance of either Cough or Spitting.

CHAP. XI.

Of the immediate Cause of Diseases.

IN the ninth Chapter we have clearly demonstrated, how the Non-naturals impress their baneful Influence upon the Evacuations, so as to intend or remit them; in the last, we have reason'd on the Consequences the Evacuations, thus perverted, will have on the Blood and Juices; and in this we are to explain how the Blood and other Humours, being increas'd or diminish'd, in their

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their Motions, from an Elevation or Depression of the Contractile Powers of the Vessels, above or beneath the Balance of Nature, affect the several Parts, and excite the Phenomena of Diseases.

THIS Method of investigating the Nature and Cause of Diseases, I have thought the most just, because we gradually proceed in unravelling the Cause and Effect, till, by a Chain of Consequences, we arrive at the immediate Cause of all Disorders in the Animal Oeconomy, and which attack the Constitution from the slightest Beginnings.

IN the Prosecution of this Subject, I shall divide the System of Diseases, I intend to treat of, into three distinct Classes, *Acute*, *Chronic*, and those of a *Complex* Nature; and this Method of classing Diseases, I observe, the most judicious *Hippocrates* has follow'd in his third Book of Aphorisms, where he mentions the Diseases incident to the several Stages of Life.

UNDER the first Class I shall range all those Diseases that attend our Times of Youth and Infancy: Under the second, those that attack our middle Age, in which I shall comprehend all that Space of Time, between thirty five and fifty five, and shall treat those Diseases of a Complex Nature, as Diseases that invade us in the later Stages of Life.

THIS Division of Diseases, into *Acute*, *Chronic* and *Complex*, I believe will hold good in all, or most Diseases that affect our Bodies, and I scarce think it possible to frame any Idea of a Disease, that will not come under one of these Denominations.

THOSE Diseases to which we have given the Title of *Complex*, are to be regarded no otherwise

wise than a Combination of Chronic Symptoms, growing inveterate by Time and evil Customs, for in the latest Period of Life, the Frame beginning to break, will greatly depress the Contractions of the Vessels, beneath the Balance of Nature, upon which the Blood will cohere, and form Obstructions in several Parts of the Body, in which consists the Nature and Essence of those Complicated Diseases, we shall more clearly illustrate, when we come to treat of those Diseases that seize People in the later Stages of Life.

BUT as Acute Diseases are the first I propose to treat of, so I shall consider their Nature, Manner of Invasion, Progress, State, Decline, and Period; and the several Symptoms that attend 'em during their Continuance, and the Reasons and Grounds of those Symptoms; of all which we shall amply treat in the second Part.

We will venture, therefore, to assert, that the two great Springs on which all Diseases turn, that affect these Bodies of ours, whether Acute, Chronic, or Complicated, are depending on the Motion of the Vessels, elevated or depress'd, above or beneath the Balance of Nature; and that the several Degrees of Diseases are owing to the several Degrees of Contraction or Relaxation of the Vessels, and Motion of the Fluids consequent thereupon; for an augmented Contraction of the Vessels, elevated above the Balance of Nature, will increase the Divisions of the Blood, and the increas'd Division of the Blood will augment the Motion, the Quantity, and Heat of the Blood; for it is a standing Maxim in Philosophy, that all Bodies gain, in their Dimensions, by Division; and the Increase of Heat always arises from that intestine Motion the Blood acquires upon Division,

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sion, and which is augmented upon its increas'd Velocity.

THE Blood thus divided, thus heated, and taking up greater Space in the Canals, will distract the Vessels, and be liable to obstruct in the minute Arteries, and an Obstruction in any Part, will create Pain in that Part ; and Pain in any Part, will impair the Action of that Part, and, of Consequence, will create a Disease that Part is subject to, which, generally attended with the foregoing Circumstances, is Acute.

THE Differences of Diseases, or *Phænomenic inseparable Characters*, which discriminate one Disease from another, is owing to the several Actions of those Parts, where the Disease is seated; being impair'd, which denominates the Disease of this or that Name or Nature ; and, therefore, to judge rightly of a Disease, our first Care must be to make a right Judgment of the Structure of the Parts ; the Changes the Solids and Fluids suffer in exciting the Phænomena of Diseases ; the Degrees of those Changes, and the Quantity of Time in which they suffer them ; for all Diseases are more or less Acute, or more or less Chronic, as the Parts in which they are seated are more or less Nervose, and as those Nervose Parts are more or less distracted with the Fluids that pass 'em, and as the Distraction is more or less suddenly made ; and the Fluids will distract 'em whenever the Blood divides faster than the Excrements it parts with can be discharg'd the Body's, and of Consequence there will be a Disease.

WHOSOEVER will give themselves the Trouble of reflecting on the Difference between a Pleurisy, Peripneumony, and Quinsy, and many other inflammatory Diseases I might range under the same Class, will easily perceive, that the greatest material

material Difference is rather owing to the different Structure of the Parts affected, than any real Absence of, or inseparable distinctive Symptoms to distinguish it by: And in simple, continual Fevers we perceive the same; for a Fever, especially of the continual Kind, is only an increas'd Motion of the Bloody, arising from a Vibration of the Vessels, heighten'd above the Standard of Nature; and to go farther in the Definition, is rather to give a Description of the Symptoms, than a Definition of a Disease, (which only ought to comprehend the Generals) as to add with great Un easiness, Heat, Thirst, and a dry Tongue, quick and unequal Pulse, these are all Symptoms; and the Result and Consequence of the Causes.

To convert a continual Fever into a Pleurisy, Peripneumony, or any other inflammatory Disease, nothing is wanting, if there be a Disposition favouring those Diseases, but to check the Circulation of the Blood in its full Career, by drinking down large and plentiful Draughts of chilling Liquors, whereupon Obstructions will arise in the straiter Vessels of the *Pleura*, and excite those Acute Pains that are inseparable in this Disease: And it is impossible to conceive, why, if two Persons take Cold, they should not both suffer, from the same Causes, the same Effects, but that the Vibrations of the Vessels in the one, that is, the Strength or Endeavours of Nature, could make greater Resistance to the Causes, and consequently dislodge 'em from the Blood, before they could gain any firm settling, in order to produce a Disease; or, that the same Parts of those different Persons, were not so susceptible of the Cause of Diseases in the one, as they were in the other; that is, that the Contractions of the Vessels of the one were stronger, more vigorous, and nearer

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the Balance of Nature, that they might the better preserve the Fluids from unfriendly Cohesions; or being too much divided; so that the same Cause, that produc'd a Pleurisy in the one, made no Impressions on the Constitution of the other; and perhaps, if a third or fourth Person had been present, they might have been differently affected from either of the former.

HENCE appears the absurd and ridiculous Definition of an Acute Fever, as given by Sir Richard Blackmore, in his Treatise of the Small-Pox; where he makes the Essence of a Fever to depend
 "on the inordinate Elevation or Exaltation of the
 "oily or fiery Particles of the Blood, while the
 "Solids remain sound and entire."

Now it is impossible for the Wit of Man to conceive, how the Fluids can be exalted in their Motions above the Balance of Nature, as this Gentleman supposes, unless at the same Time the Solids be equally elevated; and therefore in treating of Diseases, our first Regard should always be to acquaint our selves with the State of the Solids; for from this Knowledge of their Deviation, we shall only be enabled to know what Means to use for the Recovery of the Patient; for no Malady can afflict the Constitution, but what will be evidently demonstrated, and come under one of the foresaid Deviations.

Now, if we consider another State of the Solids, opposite to that which occasions Acute Diseases, and that is the State of the Solids, when their Contractions are depress'd beneath the Balance of Nature, under which Condition we may range a good Number of Disorders, and to which, I believe, most Chronic Diseases owe their Origin; for we are to consider, that this Depression of the Solids seldom happens, but to People either naturally

naturally of a weakly Constitution, or to those descended of infirm Parents, or have greatly abus'd their Manner of living, by high Feeding, Drinking, or other Errors of the Non-naturals, which, consequently, overstraining the Solids, depress' em beneath their just Balance.

To this Head we may reduce the Vapours, Hypocondria, Scurveys, Cachexies, Dropies, Aſthma's, all Decays, Wastes, and Consumptions; as also, those Diseases accompanied with Acute Symptoms; such are the Gravel, Stone and Gout; as, on the other Hand, we have confin'd most of those Disorders call'd Acute, to the Solids over inform'd, or indu'd with a Motion ſuperior to the Balance of Nature.

BUT in this later Case, where the Solids want informing, they will not be able, regularly, to bring the Fluids within the Sphere of Contact; and thus loſing their Contractions, they will in Proportion loſe their Attractions, whereupon the Fluid Particles will join in unfriendly Cohefions, and the Blood's attracting Principle encreasing stronger than is conſiſtent with the natural State of Health, will not ſuffer a ſufficient Quantity of its Particles to be diſengag'd from the Maſſ, for repairing the daily Wastes of the Conſtitution; by which Means the Body will be depriv'd of its Nouriſhment, and the nouriſhing Particles that can be brought within the Sphere of Contact, will touch at ſo few Points, as not to be able to make any firm ſettling.

HENCE those daily Complaints of Weakneſſes of the Knees and Legs, and Feebleness of the whole Body; and, in all Conſtitutions, where the Vigour of the Solids are impair'd, it muſt needs happen, that the Blood will be ſizie, groſſ, and apt to stagnate in the Capillary Veffels, where-

upon black and blue Scurvy Spots will arise in various Parts of the Body, a crass, thick, heavy Phlegm will settle in the Legs thro' a Relaxation of the Vessels, which about the Ancles will Pit like the beginning of a Dropsey: And this is the first Indication of Chronic Diseases, and arises for want of that due Spirit and Motion the Blood ought to receive from the Solids, and which it can receive from no other Fountain.

So that, to me, it most evidently appears, according to the Basis of this Theory, that all Diseases must owe their Origin to a vitiated Motion of the Solids; that is, when their Motions are perverted either above or beneath the Balance of Nature; from which Changes, I doubt not, may be accounted for, all those Variations of the Pulse, those different Symptoms that arise in Diseases; and I very much Question, whether any Thing in Nature is left, as necessary to raise the Phænomena of Diseases, besides this Perversion of the Solids from their just Standard.

C H A P. XII.

Of the Diagnostics and Prognostics of Diseases taken from the Beating of the Pulse.

Of the Diagnostics of Diseases in general.



THE Diagnostics are only the peculiar Appearances, that result from the Causes, and comprehend that Collection of concurring Symptoms, that clearly indicate the Nature and Intensity of any Disease; for every Disease has its peculiar

cular Marks or Tokens, which difference it from every other, and those inseparable Symptoms we call its Pathognomonic or distinguishing Characters; and tho' a great many Diseases have something common, as an increas'd Heat is, the inseparable Character of most Acute Diseases, yet, even in those, there are Peculiarities that distinguish one from another, tho' never so nearly related.

THE Prognostic Part of Physick teaches us to foretel what will be the Fate of the Patient, as to the Issues of Life and Death, under the present Circumstances.

THE Prognostics of Diseases, therefore, are to be taken from the Intenseness of the Disease, the Force of the Symptoms, and the greater or lesser Impressions they make upon the Constitution of the Patient.

To estimate the Intenseness of any Disease, there is to be consider'd, *First*, The Parts affected; always the more noble, the more dangerous. *Secondly*, The Degrees of Pain, and the Suddenness of its Invasion; for all Diseases are more or less Acute, as they more or less suddenly invade the Patient; and as the Parts where they are seated are more or less Nervose, and as the Organs of those Nervose Parts are more or less distracted with their Fluids. *Thirdly*, The Effects of the Symptoms, *viz.* What Danger accrues to the Parts; and in this Case the Height of the Disease is narrowly to be inspected.

IN this most absolutely necessary Branch of Physick was the Divine *Hippocrates* superior to all that either went before, or succeeded him; for he could not only determine the Issues of Life and Death, from the different Nature of the Symptoms, to a very great Certainty, but also, from the different Dispositions of Seasons, could foretel the

peculiar Diseases that were about to be Epidemical, as he did that raging Plague of *Athens*, to the Wonder and Surprise of all the World; which remarkable *Prognosis* gain'd him a Name, Great and Reverend, thro' all Antiquity.

*Of the
Pulse.*

THE Pulse being the grand Card or Compass by which the Physician steers his Course, both in estimating the Diagnostic Part, which comprehends the Intenseness of a Disease, and the Prognostic, which, with all its concurring Symptoms, discovers the Danger consequent thereupon; I think it will not be foreign to my Purpose, if, before I enter upon the Subject of Diseases in Particular, I first enquire into the Nature and Cause of its Beating, and the several Variations it makes in most Diseases, when it rises or falls above or beneath its natural Standard.

THE Cause of all Pulsation, is the Beating of the Heart, and Contraction of the Artery adjoining thereto, which communicates a Vibrating Motion to every Fibre of the Body; and this Impulse of the Solids is the Spring that supports the Motion of the Fluids in every Part.

FROM the Beating of the Pulse we draw several certain Conclusions, especially in Acute Diseases; for from the Elevation or Depression of the Pulse we judge the Impulse of the Heart to be stronger or weaker, the Contraction of the Solids to be greater or lesser, and, of Consequence, the Motion of the Fluids to be swifter or slower.

THE several Degrees of Cohesion of the Fluids are discover'd from the different Motions of the Solids, and we demonstrate the different Motions of the Solids from the Variation of the Pulse,

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WHATSOEVER, therefore, will raise the Beating of the Pulse, when depress'd beneath its natural Standard, will raise the Contraction of the Arteries, will proportionably Increase the Motion of the Fluids, and, of Consequence, will contribute very much in bringing the Fluids, destin'd for Nutrition, within the Sphere of Contact, by destroying their Cohesions, and breaking, dividing and attenuating their Viscidities, whereby they penetrate the minutest Artery.

BESIDES, the quicker is the Motion of the Fluids, the oftner are they brought to the Test of the Strainers, the sooner will they depurate and refine; all which Effects are discover'd by the Beating of the Pulse, and have their whole Dependence upon the Vigour, Activeness, and Springiness of the Solids.

WHEN a Physician, therefore, visits his Patient, before he makes any Enquiries into the Nature of the Disease, the State of the Patient, Pressure of the Symptoms, or prescribes any Medicine for the Relief of his Malady, his Business is, in the first Place, to feel the Pulse, and to determine the Conduct of his future Directions, according as he finds that to vary from its natural Beating.

IT is true the Pulse cannot inform us of the particular Nature of the Disease, more than inspecting the Urine, yet are both necessary in discovering the Intenseness of the Disease, and making a sure *Prognosis* of Danger or Safety.

WE discover the particular Species of the Disease, by knowing the Parts affected, if any be primarily affected, or by knowing the Intemperature that discomposes the Structure of the Parts; and as that Intemperature must arise from the Information of the Solids, elevated or depress'd above

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bove or beneath the Balance of Nature, which constitutes the Essence of all Diseases, both Acute and Chronic, so the particular Species, as we have already observ'd, must be determin'd from the Parts affected, and the Degrees of its Intenseness from the Variation of the Pulse.

THE right Knowledge of the Pulse then, being of such extraordinary Service, we shall here enquire into its Nature, Degrees and Variations, and the Diagnostics and Prognostics we ought to make from the Difference of its Beating; and, tho' Authors make a vast many Distinctions and Subdivisions of the Pulse, more, I am sure, than the most skilful Physician can distinguish from the Application of his Finger to the Wrist; yet I shall only take Notice of four Variations it makes in Diseases, when it starts in its Beating from the Standard of Nature, *viz.* as its higher or lower, quicker or slower.

A HIGH Pulse, that is quick in its Beating, indicates Acute continual Fevers, and generally attends the Paroxysms of Chronic Diseases, where the Intenseness of the Pain is apt to create a Fever; for the Solids, in their Contractions, while the Body labours under the Paroxysms of Chronic Diseases, are always elevated above their natural Balance, which Elevation they suffer from the Endeavours of Nature to remove the Cause of the Paroxysm.

A QUICK Pulse, if it be a low Pulse, is ever a weak Pulse, which most commonly attends Malignant Fevers, and arises from an Obstruction of the Glands of the Brain, whereby the Animal Spirits cannot be detach'd in Quantities sufficient to influence the Heart. Hence spring all those Stupors and Disorders of the Brain, that generally under these Circumstances prove fatal to the Patient.

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ON the contrary, a high Pulse, if it be a strong Pulse, for the most part indicates a hard Pulse; and this Elevation of the Solids generally is attended with inflammatory Fevers, as the Pleurisy, Peripneumony, Quinsy, Acute Rheumatisms; all which Diseases proceed from a Fullness of the Vessels, which keep the Arteries tense, and, as it were, distract'd with their Fluids.

IN all Pains that affect the Nervous Parts, and therefore are greatly Acute, the Pulse differs little from what it beats, while the Body labours under Acute Inflammatory Fevers, as in the more severe Pains of the Gout, Stone, &c.

CHRONIC Diseases, such as arise from an over relax'd State of the Solids, whereupon the Viscidities of the Fluids are greatly increas'd, have always for their Concomitant a slow, weak Pulse, languid, tho' equal, but yet stronger than that which attends Malignant Fevers. This generally accompanies the Scurvy, the *Hypochondria*, Melancholy, Jaundice, and all those of a Cachectic Habit of Body; and if the Pulse under these Circumstances vary a little quicker, there is Danger of Wastes, Decays and Consumptions.

LASTLY, In the Beating of all Pulses, a due Regard must ever be paid to the Constitution of all Bodies, and their different Temperaments; for it may be generally observ'd, that those Persons of an active, brisk Disposition, have naturally a quick, unequal Pulse, which, upon any sudden Surprize, is apt to flutter; when, on the contrary, the Pulse of one naturally of a listless, unactive Disposition, beats with a heavy Pace, and, as it were, founders along. Yet, at last, I must confess, such is the Variety of Pulses in healthful Dispositions, that no clear Indications can be taken entirely to depend upon, whereby the Physician may find a certain

certain Prognosis of the Issues of Life or Death; for in some Cases, especially Malignant Fevers, we have observ'd the Patient recover, when all the Symptoms of the Pulse have absolutely determin'd a fatal Prognosis.



C H A P. XIII.

Of the Diagnostics and Prognostics of Diseases taken from the Urine.

 SEEING the Ancients paid such a Reverence to the Urinal, as in most Diseases to prognosticate something from its Inspection, it would be unpardonable in me to pass it over without some particular Remarks.

IF we consider the Nature of this Fluid, and the Manner of its Secretion, we shall be able, in many great and dangerous Diseases, not only to discover the Intenseness of the Symptoms, but also to make some considerable Prognostics in determining the Danger or Safety, that may be expected from the Issues of the Disease.

INDEED the Misfortune is, that this Practice of discerning Diseases, and prognosticating their Danger from the Nature and Difference of Urines, has been prostituted to such vile Ends, as to bring it into the general Contempt of those that ought to know better, than to lay aside any useful Knowledge, because it may, or has been prostituted to base Ends.

I SHALL, therefore, for the Benefit of those that retain any Regard for the Judgment to be made

made upon Urine, in Diseases, lay down Instructions for knowing the Indications that may, or may not, upon just Observations, be deduced from this Way of Practice; for so intricate are the Progress and Scenes of some Diseases, that they require all the little Aids and Helps we can, by any means, obtain, for clearing up the Difficulties that attend their Cure.

INDEED, I may not deny, but that there is a Statute I have read, which obliges the several Physicians, Members of the present College here in *London*, not to give Judgment upon Urine, unless call'd to visit the Patient, and present to judge of all the other concurring Symptoms, which being duly weigh'd together, contribute not a little in determining with some Certainty what will be best for the Relief of the Patient.

*STATUIMUS & Ordinamus, ut nemo, sive
Socius sive Candidatus, sive Permissus, Consilii quid-
quam impertiat Veterariis & Impostoribus super
Urinarum nuda inspectione, nisi simul ad Egrum vo-
cetur, ut ibidem pro re nata idonea Medicamenta ab
bonoſto aliquo Pharmacopolo componenda prescribat.*

THE Urine, we all know, is a Fluid separated from the Blood, and secreted by the Kidneys, and as the Contraction of the emulgent Arteries are elevated or depreſ'd above or beneath the Balance of Nature, so is the Texture of the Renal Glands more or less springy, so is the Urine more or leſs grossly secreted; which different manner of Secretion, either renders it limpid, clear, and watery, as generally attends the Beginning of Acute Diseases, or crouds it with a gross, muddy, turbid Sediment, as always appears to affect the Urinal under Chronic Indispositions.

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WE observe, in all Acute Diseases attended with highly dangerous Symptoms, such as the Pleurisy, Peripneumony, and the Burning Cough; that the Urine, in the Beginning, is very clear, and but little in Quantity; which proceeds from the Vibrations of the Arteries being so highly elevated above their natural Poise, as almost to convulse the springy Orifices of the Glands, upon which nothing but the clearest and thinnest Parts of the Blood can make their Way thro' those minute Passages. And that intense Heat and Dryness of the Habit, which always attend the extremest Acute Diseases, proceed generally from an over violent Contraction of the Cutaneous Glands, which both indicate the Severity of the impending Symptoms, and give us a Prognosis, far enough, of what may be expected from the Event of the Disease.

IT is a general Observation, when with Exercise we are very hot, or much fatigued with walking, that a Glass of cold Water shall, instead of allaying, increase the cuticular Discharges, whilst that a Dram of some rich and generous Cordial shall restore the Springiness of the Glands, contract the Sweats, and raise the Vigour of the Solids. This we observe daily to happen, and there is scarce an old Woman, but what can tell it you without the Assistance of her Physician.

ON the contrary, when the Arteries are too much relax'd, as always happen under Chronic Diseases, from their Contractions being depress'd beneath their natural Standard, the Secretion of the Urine will be grosser; for the Glands of the Kidneys being more languid in their Springs, will not be able to prevent such Cohesions in the Fluids, as will afford a Sediment of different Kinds, according to the different Nature of the Disease,

Disease, abating for the Difference of Constitution, Manner of Living, &c.

THE Jaundice most commonly produces a bitter Urine, and which will tinge any thing dip'd in it of a pale Green, or deep Yellow.

A DIABETES manifests itself evidently from the Taste of the Urine, which always abounds with saccharine Salts, that give it a sweet *Sapor*, and which proceeds from an universal Decay of the Contractile Powers of the Solids.

An insipid Urine, or tasteless, is a very dangerous Symptom, and always indicates that the natural Digestions of the *Viscera* are highly vitiated.

DECAYS, Wastes, and Consumptions are discover'd from the Urine's abounding with thin Skins and a mucose Substance, that separate from the Bladder, as it suffers in the general Decay with the other Parts. Sometimes when this Bowel is primarily affected with an Ulcer, Sloughs will come away with the Urine, which, when it settles, appears to contain a white gritty Sediment, as commonly attends those that are highly Scrofulous and stor'd with a houseful of gravel. Thus far it evidently appears, that there are some Diseases that may certainly be known from the Quantities and Qualities of the Urine; and others that naturally result from its Consents, or the Separations it affords; after it has stood a little, as Gravel settling to the Sides or Bottom of the Urinal plainly indicates the Constitution inclinable to a Calculous Disposition, or some Chronic Disease.

A PLENTIFUL Discharge of Urine, therefore, is a favourable *Prognosis* under all Diseases, except the Diabetes, for it argues the Solution of the Disease, especially if it be acute, and a plentiful

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ful Sediment cloud the Urinal, and that the Solids are retreating within the Balance of Nature. Hippocrates himself makes it a laudable *Prognosis* in Vomitings, in Fluxes, and in Fevers, especially the Nervose. Indeed, in these later Cases of Fevers, it sometimes supplies the Discharge wanted, and which cannot favourably be procur'd by the cutaneous Emanctories.

ON the other hand, its Suppression or partial Evacuation, that is, when it is in lesser Quantities than the natural Secretions require it should be, often is a fatal Omen, and argues that the Disease, if Acute, is not at its Height; and in the Fits of Chronic Diseases, indicates, that the Paroxysm will be of long Continuance, as often happens in the Gout, Stone, and Asthma.

THOSE Medicines that go under the Name and Title of Diuretics; and therefore are suppos'd to obtain great Influence in forcing this Discharge, are the most precarious Class of Medicines in the Republick of Physic, nor can safely be depended upon in any Disease attended with imminent Danger; for instead of encreasing, they often suppress this Evacuation; and those that are the strongest, often give us the least Quantities of Urine, because their stimulating Powers too much restore the Springiness of the secretory Glands, which straiten their Passages, and occasion those Stranguries and Pains that most complain of, upon taking a larger Dose of the stronger Diureties.



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THEORY
OF PHYSICK
AND
DISEASES.

PART II.

CHAP. I.

Of Acute Diseases in particular, or those
that attend us in our younger Years.

Of Vomiting.



In treating of Diseases most incident
to human Nature, I shall first con-
sider the Nature of the Disease,
the Parts affected, the Variety of
Symptoms, the several Causes, and
the Prognostics; and these several
Parts I shall range under distinct Classes, to avoid
that Confusion inseparable to most Authors, that
have treated on Physical Subjects.

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I HAVE chosen to write of Acute Diseases first, because they are the Disorders that generally attend us in our younger Years, and Times of Infancy; and in prosecuting this Subject, I will begin with Diseases, as Anatomists begin their Dissections of Bodies, and that is, with those that affect the lower Belly, *viz.* the Stomach and Bowels; and in this Discourse I shall only take Notice of those Diseases that most generally affect us, and so trace them into the Blood, where we will treat of Fevers, their various Kinds and Degrees, as also the Nature and Cause of Chronic Ailments, till we end in those complicated Disorders, that most commonly attend us in the latter Stages of Life.

Now the first Disease that offers itself to our Consideration, as of any material Consequence, is Vomiting, which, when great and sudden, is apt to harass the Patient, and put all Nature into great Disorder.

THE Persons most incident to be affected with Vomiting, are those of a sanguine or bilious Constitution.

THE Seat of all Vomitings is in the Stomach, which is the chief Bowel employ'd by Nature for rightly fitting and preparing our Aliment for the Nourishment of the several Parts.

THIS Affection evidently appears to be of dangerous Consequence; for while it continues, no Nourishment can pass into the Blood, nor be concocted, nor assimilated; so that if it violently continue for any considerable Time, it will drain the Body of its proper Juices, and, by defrauding the Parts of their Supplies, occasion Wastes, Decays, and other Chronic Diseases, desperate of cure.

ALL Vomitings are preternatural, as being contrary to the proper Action of the Stomach, and they

they are either critical Discharges made upon this Bowel, from a Superabundance of Juices greater than the Vessels can wield, as often happens in Fevers; or they are symptomatical, that is, arising from some other Disease grievously afflicting the neighbouring Parts, as often happens in Cholie Pains, the Stone or Gravel in the Kidneys, of which see more in my Treatise upon those Subjects *, as also from Blows, or great Concussions of the Brain; but here I shall only consider it as a Disease proceeding from the Disorders of the Stomach itself, without relation to any other Part, and shall treat of it as a Symptom, when I come to treat of those Diseases it generally attends.

THE Diagnostics attending Vomiting are various; for in some this Disorder is very sudden, in others it is preceeded with a Yawning, and Stretching of the Jaws, a *Nausea* and Loathing of all manner of Meats, which is attended with great Sickness, and most troublesome Sensations both in the Brain, Breast, and Stomach; these Symptoms are follow'd with a limpid *Saliva* issuing from the salival Glands, and dribbling from the Mouth, by a trembling of the nether Lip, a Hickup or two follows, which is immediately succeeded by Vomiting, or an unloading of the Stomach by the left Orifice, whereupon, the Contents issue out of the Mouth with that Violence, as if it were rais'd from the Stomach by the Force of a Pump: This plainly indicates, that the Stomach Fibres are greatly convuls'd, and their natural Tone and Order highly perverted.

BUT tho' Vomiting is generally a Relief to the Patient, when he can this Way disburthen

* Vid. *Treatise of Stone and Gravel.*

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the Stomach of those noxious Juices, that annoy Nature, and pervert her Operations, yet not always can he obtain this Benefit ; for sometimes the Matter irritating the Stomach is not so speedily cast off, and then he is seiz'd with a most inexpressible Pain about the Pit or upper Orifice of this Bowel, the most sensible Part, from the Consent of Nerves distributed equally to it and the Brain ; hence arises that burning Pain about the Pit of the Stomach call'd the *Cardialgia*, which is often attended with great Anxiety, Fainting, and Swooning ; whence follow cold Sweats, with a Chillness of the extreme Parts ; which Disorders are best reliev'd by a Cordial Dram, that seldom fails to create a gentle Vomiting, that flings off those noxious Juices, that irritate the Stomach, and cause the foreaid Symptoms.

VOMITING may arise from any thing that may irritate the Membranes of the Stomach. Such Causes are a Wound, Inflammation, Ulcer, or Grangrene of the Stomach or Bowels, the Recoiling of the Gall and Pancreatic Juice will excite biliose Vomitings, greatly disturbing to Nature ; as also the Assumption of sharp, irritating Medicines, Vomits, Purges, Poisons, &c. The eating plentifully of unripe Fruits, which, turning to Crudities, will excite grievous Vomitings.

THE remote Causes of Vomiting existing in the Body, arise generally from a Harmony of the Parts corresponding with each other, from a Consent of Nerves equally dispers'd in the Part affected with the Stomach, upon which it suffers the same *Angor* and Uneasiness with the Part affected, and endeavour to relieve it by Vomiting. Thus the Disorders of the Bowels, Guts, Midriff, Head, Kidneys, Womb, Liver, and Spleen, are frequent Causes of Vomitings, as also Worms ; and what-

ever

ever else excites the Contraction of the Stomach-Fibres, above the Balance of Nature, will have the same Effect.

VOMITING, whether natural or procur'd by Art, is a mighty Relief to Nature in many Diseases; for besides its freeing the Stomach from any oppressive Load, it often discharges the Body of its vicious Juices, by a nearer and more expeditious Way, than can be effected by their passing the slow Motions, and various Turnings of the Intestines. But notwithstanding those Advantages, nothing is more dangerous, and of worse Consequences, if it continue violently to affect the Patient for any considerable Time. That which arises from the Disorders of the Stomach, or from disagreeable Food, is easily appeas'd, if taken in Time; but if great, sudden, and spasmodic Vomitings arise in weakly Constitutions, they often prove deadly, or create Wastes, Decays, or some other Chronic Indisposition. Vomiting of Blood is ever a pernicious Symptom; and so are those violent Vomitings that come upon the Iliac Passion, or obstinate Cholic Pains.

C H A P. II.

Of Fluxes.

FROM the same Causes that create Vomitings, generally arise those Diseases we call Fluxes; and they are distinguish'd by the several Names of a *Diarrhoea*, *Dysentery*, *Cholera*, and *Tenesmus*. The Lientery and Celiac Affection proceed both from the

same Cause, and require the same Method of Cure with the former.

THESE are the most general acute Diseases of the Bowels, and, for the several Species of Cholic Pains, I shall range 'em under the Class of Chronic Diseases, with Acute Symptoms, and consider their Nature and Cause, when I come to treat of those Diseases.

As the proper Action of the Stomach is Chylification, or the Conversion of our Aliment into a Juice, fitting to nourish the Body: So the proper Office of the Intestines is to conduct the Chyle, thus prepar'd, by the Mediation of the *Venia Lactea*, and to help on the Descent of the Excrements by their Vermicular or Peristaltic Motion. But if this Motion, natural to the Intestines, be, by any Cause, perverted above the Balance of Nature, then the Excrements will be too much divided, and turn'd off the Bowels in Liquid Stools, for their natural Consistence ought to be figur'd, not hard, soft, not fluid.

THIS Affection of a Loosness often attends Fevers of all Kinds, and is a critical Discharge made upon the Bowels by Nature, in her endeavouring to fling off the Load that oppresses her, and in such Cases, I have generally observ'd it a good Omen: This Evacuation, when it is simply by itself, is vulgarly call'd a Flux of the Belly.

A DIARRHOEA, therefore, is a simple Flux of the Bowels, whereupon, the Intestinal Fibres make brisker and smarter Vibrations upon the contain'd Excrements, and by this Means renders 'em more Fluid, than is consistent with the Body under a State of Health.

A DYSENTERY is only a Flux of the Bowels, where Blood is mix'd with the Excrements, and

and most commonly it attends a *Diarrhoea* of long standing.

A **C**HOLERA is a Convulsive Motion of the Stomach and Guts, in which the Bilious Excrements are discharg'd in great Quantities both upwards and downwards. This Disease, in the Beginning, is attended with great Anxiety and Pain at the Pit of the Stomach, and, if not speedily reliev'd, turns to the Iliac Passion. The more dangerous this Disease is, which depends upon the Greatness and Quickness of the Evacuations, the worse are the Symptoms, as Prostration of the Strength, Swoonings, Hickups, Convulsions, and Coldness of the extreme Parts, which are frequently the Forerunners of Death.

THE *Cælic Affection* is a Species of Fluxes, wherein the Aliment is turn'd off the Intestines partially digested.

A **L**IENTERY is the highest and most dangerous Species of Fluxes, and proceeds from the Weaknes of the Intestines, *viz.* when their Membranes are so thin and weaken'd from the foregoing Fluxes, as not to be able to make suitable Impressions upon the Meats, in order to their Dissolution, but are turn'd thro' the Guts little alter'd from what they were when taken.

THE Cause of all these several Fluxes, is the Bile and Pancreatic Juice abounding with Acrimonious Particles, press'd into the Intestines, from their respective Ducts; for as the Bile, continually flowing into the *Duodenum*, is that natural *Stimulus*, that furnishes the Guts with their Vermicular or Peristaltic Motion, so is it highly reasonable to suppose, that when it is preternaturally affected; that is, when it is redundant, it will cause a preternatural *Stimulus*, and, of Consequence, a preternatural going to Stool, or what we vulgarly call a Loosness.

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THE immediate Cause, therefore, of all those several Fluxes, arises from a preternatural *Stimulus* apply'd to the Stomach and Intestines. If the *Stimulus* affect the Stomach only, then it excites Vomiting alone, tho' severe Vomiting continuing, any Time, strongly to affect the Stomach, seldom or never fails to send down loose Stools ; and this appears, evidently, in the Administration of Vomits, which, tho' never so mild, frequently, towards the latter end of their Operation, determine the Bowels to a Stool or two. If the *Stimulus* affect the *Pylorus*, or Beginning of the *Duodenum*, it excites a Purging both by Vomit and Stool, with great gripping Pain and Heat, which constitute the Nature and Essence of that Illness we call the *Cholera* ; and if the *Stimulus* be very great, it sometimes so divides the Fluids in the Fibres of the Intestines, as to tear their Coats, whereupon Blood is pres'd into the Intestines, and mixing with the Excrements, creates that Disease we call a *Dysentery*, which, sometimes ulcerating, turns to a Gangrene, and causes the *Liac Passion* ; for the *Faces* can obtain no Motion where there is a *Sphacelus*, because in a *Sphacelus* the Peristaltic Motion is entirely destroy'd.

THE *Lientery* and *Cælic Affection* differ only in Degree, and, as we have observ'd above, proceed from a Weakness of the Intestines, and are generally the Effects of some of the former Fluxes. But if the *Stimulus* affect the *Rectum*, which is the last of the great Guts, then there follows a *Tenesmus*, which is often a troublesome Symptom to Women after Delivery, or those that labour under the Stone and Gravel, as I have more largely observ'd in my Treatise on those Diseases.

We will venture, therefore, to assert, that all Fluxes, whether upward or downward, by Stool

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or by Vomit, do arise from the Elevation of the Peristaltic Motion of the Stomach and Intestines above the Balance of Nature; that is, when the Fibres that compose the Membranes of the foresaid Bowels are more springy and tense than their natural Motions require, upon which their Contractions will be more smart and sensible, whereupon the Excrements will not only be too much thin'd, divided, take up more Room, and be hurried off by loose Stools, but the included Juices in the Intestinal Fibres will also be very much rarified and divided, consequently be a Cause of those gnawing Gripes and acute Pains, that attend the Bowels under those Maladies; and it's only from this Division of the circulating Fluids in the Intestinal Fibres, that we can account for those Inflammations, Ulcers and Gangrenes that attend the severer kinds of Vomitings and Fluxes, especially the *Ilic Passion*, and *Cholera Morbus*.

Thus far we have consider'd the Nature and immediate Cause of Vomiting and Fluxes, that generally disturb the Stomach and Bowels, as also their several Pathognomonic Symptoms, or inseparable Diagnostics, which constitute the Essence of this or that peculiar Flux.

Now nothing can oblige the Peristaltic Motion of the Guts to exceed the just Balance of their Contractions, but a preternatural *Stimulus*, which, in every Loosness, as we have already observ'd, is the immediate Cause. But then the Question recurs, what causes that *Stimulus* of the Bile to be preternaturally affected; and this must proceed from some other Evacuation suppress'd (if not the taking of some Purging Medicine) which, as I endeavour'd to prove in the tenth * Chapter, is the

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• *Vid. Part 1. Cap. 10.*

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proximate Cause of all Diseases, for no Disease can scarce affect the Body, unless some of the Evacuations be suppress'd ; for, naturally, the Increase of one is the Lessening of another, and, *vice versa*, the Lessening of one, the Increase of another, or else a Disease will arise ; for while the several Evacuations are in just Quantity and Consistence the Body will remain in *Æquilibrium* ; that is, under the just Standard of Health.

So that it is necessary, in order to produce a Disease, that some of the Evacuations should be suppress'd, which will naturally increase a liberal Discharge of some others ; and where there is a Disposition in the Bowels, favouring that Discharge, it is generally by Liquid Stools, and constitutes that simple Flux we call a *Diarrhœa*. Not that it is absolutely necessary, that any Evacuation suppress'd, should cause a Flux of Juices to run off upon the Bowels, for the over-Balance may discharge itself by Urine or insensible Perspiration ; but this I will venture to aver, it must go off some Way, and no Way so natural as by Stool, because the Guts are furnish'd with innumerable Glands, to receive any Surcharge of Humours, that tend, for a Vent, this Way ; and if the Spring of those Glands, by any Means, be over-relax'd, the Discharge will be greater than naturally the Body can well spare, which often creates those Colliqueutive *Diarrhœa's*, that generally attend Decays, Wastes, and Consumptions.

DR. Cockburn makes a Distinction between a *Diarrhœa* proceeding from a *Stimulus*, and that from old Age ; but will he aver, that a *Diarrhœa* attending old Age, does not proceed from a *Stimulus*? I deny that any Flux can happen to the Bowels without a *Stimulus*, and whenever a Loof-

ness

ness attends the Bowels, the *Stimulus* is the immediate Cause, and proceeds from some other Evacuation suppress'd, which increases the natural Discharge of the Bile and Pancreatic Juice into the Bowels, and is the proximate Cause. If old Age were the Cause of a Loosness, then all old Men must be subject to a Loosness; but on the contrary, I know several that are subject to a costive Belly, and the Reverend Mr. Edgley of *Alton*, who was near ninety Years of Age, told me himself, that he was oblig'd frequently to smoke a Pipe, to have the Favour of Nature this Way.

Now, as a Suppression of any remote Evacuation will cause a Flux to fall upon the Bowels, the next Question that offers itself to our Consideration, is, what should occasion the Suppression of any Evacuation, that may constitute a *Stimulus*, that may cause a *Diarrhaea*, *Dysentery*, *Cholera Morbus*, and *Tenesmus*? And this brings me to the first and original Cause of all Diseases; and that is the Non-naturals, especially the Air and Diet, both which have great Influence in producing Fluxes: But as I have greatly illustrated those Points in the ninth Chapter, where I professedly treat of the Non-naturals, and the different Influence they have in producing Diseases, so I shall refer the Reader to what I have there deliver'd on those Subjects.

THE Prognostics of Fluxes are to be taken from the Intenseness of the Symptoms, the Colour and Smell of the Stools, the Strength or Weakness of the Patient to endure it, and the Length of Time it has follow'd him. A recent simple Flux is a Benefit to Nature, and if it do not distress the Strength, may be tolerated three or four Days. I have known a Bloody-Flux

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continue above three Weeks without any evident Signs of Disorder; yet that is not a Rule to be follow'd: Where Vomiting attends the Discharge downwards, as happens in the *Cholera*, there is great Danger, which calls for immediate Relief. The *Lientery* and *Cælic Affection* are always attended with imminent Danger, and very often prove fatal: Great Quantities of black adust Choler voided with the Excrements, denote the Flux to look with Aspects of Danger, as also when great Quantities of Blood is mix'd with the Excrements. It is a safe Prognostic, if a Flux of the Bowels happen either in the beginning of Fevers, or after their *Crisis*; but if before, they commonly prove mortal. A Vomiting following a Loosness is a good Sign. When the Patient begins to void much Urine and Sweat plentifully, it is a Sign that the Loosness is going off.

C H A P. III.*The Nature and Cause of simple continual Fevers.*

ROM treating of Diseases that attend the first Passages, proceed we, in the next Place, to consider those that affect the circulating Fluids: And as no Acute Disease can affect the Body without Pain, so no Pain can disorder the Parts, without inducing a Fever; and as a Fever is the first Disorder that affects the Blood and Vessels, so is it a peculiar Symptom inseparable to all Acute Diseases,

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Diseases, as we shall more clearly illustrate in the following Chapter.

BUT before I proceed to unravel the Nature and Cause of Fevers, I think it will not be improper, if I first premise a general Survey of their Frequency, and the Persons most liable to these Affections, that by the general Suffrage of all the Ancients, are suppos'd to destroy the third Part of Mankind.

INDEED their Frequency furnishes us with great Opportunities of observing their Natures, Causes, and Variations, for they spare neither Age, Sex, nor Constitution, for the Weak, the Tender, the Child, and the Infant, are as much subject to Fevers, as those grown up to Years, and of the most robust Constitution.

I SHALL only divide the Matter of my *Division of* course concerning Fevers, into three distinct *Chap-* *Fevers.* *ters,* in which I shall consider, the Nature and Cause of the continual Acute, the Inflammatory and Nervose, or those vulgarly call'd Malignant Fevers; and under these three Divisions, shall endeavour to comprehend all those needless Subdivisions, which Authors have run upon Fevers; and as the continual Acute are the most mild, so we shall begin to explain their Nature and Cause first, and after that go on to treat of Inflammatory, and shall handle Malignant, or the Nervose Fevers last, as those of the most dangerous Aspect, and which oftenest prove mortal.

CHILDREN, from the Times of Infancy, till they are ten or twelve Years old, are subject to the Burning Fever, Convulsive Fever, and Spotted Fever, or, as some call it, the Scarlet Fever. I only call that a Convulsive Fever, where Convulsions attend it in the Beginning, for in Children, I have often observ'd them not only to attend the

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Fever before the breaking out of the Small-Pox; but also the Scarlet Fever, and particularly that which inseparably attends Children in breeding their Teeth.

THE Reason why Convulsions generally attend Children in the Onset of Fevers is, because, being that they are of a more hot Constitution, according to *Hippocrates*, than those more advanc'd to Age, their Blood is apt to divide faster, in Respect of their Tenderness, than in those that have pass'd their Childhood; but, be that as it will, of this we may be certain, that all those several Symptoms, that attend these different Fevers, are depending upon the Divisions the Blood suffers, when, by any Means, it arises above its natural Motions, and therefore I proceed to consider the several acute continual Fevers, that attend those more advanc'd in Years, the most simple of which is the *Febris Ephemera*, or Diary Fever.

THIS is a slight Indisposition, wherein the Blood is increas'd but a little above the Balance of Nature, with a slight Heat, quick Pulse, and Uneasiness; but so easy are the Symptoms in this Fever, as scarce ever to require the Physician's Aid, unless the Patient, thro' Carelessness, suffers it to gain Force, and turn to a *Synochus*, which is only the same Fever augmented, and as the former was only a Fever of one Day, if it had gone off kindly, so the *Synochus* is of several; for Acute Fevers differ only as the Blood is more or less divided, which puts on different Symptoms, as the different Parts where they are seated happen to be distracted with Pain.

Their Manner of Invasion.

THEIR Manner of Invasion differ very much, according to the different Ages and Constitutions of Persons they seize, a due Regard being always had to the Season of the Year.

THEY

PHYSICK and DISEASES.

III

THEY insult Children, generally, with Convulsions, or Epileptic Fits, especially those Fevers that attend 'em during their breeding Teeth, as also before the Eruption of the Small-Pox and Measles. They are attended with a continual Cough, very disturbing in the Night Time, and towards the Evening; burning Heats, Thirst, and great Restlessness are inseparable Symptoms.

THESE greatly portend the Small-Pox and Measles, if the Child has not yet had them. In those more ripe of Years, it invades with a shuddering Horror, to which succeeds a Chillness all along the Surface of the Body, especially in the extreme Parts. These Symptoms are follow'd with great Heat, Thirst, a quick and unequal Pulse, which generally are the inseparable Characters that attend the milder Fevers, such as the *Ephemera*, or *Synochus Simplex & Putridus*; but if the Fever increase, or proceed from any great Cold, that suddenly braces or locks up the Pores of the Skin, it often turns to the *Causus*, or Burning Fever, which is usher'd in with more formidable and dangerous Symptoms; for to the Chillness, which always precedes Acute Diseases, there immediately succeeds an extreme burning Heat, great and intolerable Pains of the Head, Limbs, Back and Breast.

THE Tongue is either moist or dry; if moist, it is clammy, and fur'd with a white Scurf or Film; if dry, it is black, and great Thirst and Drought attend it: The Patient is greatly restless and uneasy, tosses and tumbles in the Bed, and can, on no Side, compose himself: His Countenance is very high colour'd, his Pulse quick, high, and unequal; and if the Fever abate not about the ninth or tenth Day, he is Comatose, or affected with a *Stupor*, and sometimes Delirious;

tho'

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tho' these last two Symptoms seldom happen, if due Care be taken in the Beginning. When the Scene arises to this height, these additional Symptoms following appear: The Face looks swollen, as also the Veins, the Eyes start, are red and angry, the Breath short, and he respires thick, the Pulse is little, quick, and fluttering, the Urine clear, limpid and watery, which lets fall a Cloud when it has stood a little, and but in little Quantities; and if under those dreadful Appearances the Body feels dry and scurfy, the unhappy Patient has not a single Cast for his Life.

Parts affected.

THE Parts affected in continual Fevers, are all those where the Heat is preternatural; that is, every Part of the Body where the Blood circulates, so that the Solids as well as the Fluids equally suffer under the Tyranny of Fevers.

Now from what Origin all those Symptoms, so distracting to Nature, and which constitute the Essence of a Fever, and vary its Name and Nature, should arise, we are now to enquire.

AND, I think, if we duly consider the Connection and Dependance they naturally have upon each other, we may easily account for their Cause.

First, It evidently appears from the Distraction of the Vessels, and Swelling of the Face, as also great Heat, Thirst, and Restlessness, that the Quantity and Motion of the Blood is increas'd, as also its Division, on which that Intestine Motion depends, which creates those preternatural Heats, that generally attend all Fevers; for tho' in the beginning of all Acute Fevers, or indeed Diseases, there is generally felt a Chillness, or, as it were, a slight Horror, or Convulsive Motion

to

to affect the Surface of the Body, which is succeeded with great Heat, Restlessness, &c. yet that Horror proceeds only from a sudden Contraction of the Cutaneous Glands, which obstruct the perspirable Matter, and oblige the Fluids, which ought to pass off by the Skin, to recoil more inwardly; but upon the increas'd Impulse of the Heart, and Contraction of the Arteries, which are always greater and stronger, as the Resistance of the Fluids bears more hard upon 'em, they are impell'd, with greater Force and Motion, to the Surface of the Body again; which greater Force and Motion occasions that greater Heat, that generally follows the Chillness perceptible in the first Onset of all Fevers.

THUS far I have grounded the Argument concerning the immediate Cause of the Symptoms. I therefore take the Symptoms of all continual Acute Fevers to proceed from an increas'd Circulation of the Blood, arising from a Contraction of the Arteries, elevated above the Balance of Nature.

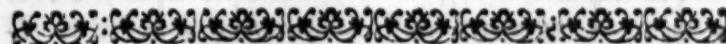
FROM the elevated Contraction of the Vessels, the Blood obtains greater Force and Motion, and from an Increase of its Force and Motion, arises its greater Division, which necessarily increases its Quantity, as also its Fluidity, all the necessary Consequences of its Division; and from the Division, Motion, and Quantity of the Blood encreas'd, arise those burning Heats, those intense Thirsts, Inflammations, Deliriums and Phrensy, which not seldom happen in the severer Kinds of Fevers; for the Heat of the Body is ever in Proportion to the Intestine Motion of the Blood, which is dependent on its Division, as we have more clearly explain'd in the Beginning of this Treatise.

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THE Pulse is higher or lower, quicker or slower, according as the Arteries are more or less distract'd with Blood; for as the Arteries are more or less distract'd with their Fluids, the Sides of the Artery, in every Pulse, will come more or less near each other, and, of Consequence, make the Pulse vary; tho', in all these Variations of the Pulse, something must be abated for Difference of Constitution.

FROM the foregoing Arguments and Reasonings upon the Nature of Fevers, I draw this evident Corollary: That the Blood's dividing faster than it can be detach'd thro' the perspirable Excrements of the Skin, is the immediate Cause of the Heart's preternatural Beating; but then this Question recurs, viz. *What should cause this preternatural Division of the Blood;* and that will appear to arise from the obstructed, additional Quantity of the perspirable Matter, added to the natural Quantity of the Blood, which greatly augments the Impulse of the Heart, and Contraction of the Arteries, on whose Forces the Division and Fusion of the Blood entirely depend; and as Perspiration, the proximate Cause of Fevers, is an Evacuation the most considerable for Quantity, so is it more immediately depending on the Influence of the Non-naturals, the primary Cause of all Diseases. If it proceeds from taking Cold, or the Season of the Year, it is generally Epidemical; but very often its Origin is owing to a Debauch, when the Solids have been highly charg'd with spirituous Liquors, and the Dose repeated, of all which, we have greatly illustrated in the ninth Chapter, where we have treated of the first and most general Causes of Diseases.

As to the Prognostics, a simple Diary Fever *Prognostics.* is never dangerous, and a *Synochus Simplex* is always safe, and often terminates of itself, by a gentle Breathing; the *Causus* or Burning Fever is of most dangerous Consequence, because of its formidable Symptoms; a moist, clammy Tongue, with a white Scurf, is always a more favourable Prognostic, than when the Tongue is dry, parch'd and black; but when the Pulse flutters, the Breath shortens, and a Delirium seizes the Brain, the Case is highly dangerous, yet many under those Circumstances recover. A raging Fury is a much safer Prognostic, than if a *Stupor* seizes the Brain. In this later Case very few escape, because the Glands of the Brain are obstructed, whereupon all the Organs are depriv'd of a due Quantity of Animal Spirits to influence their Actions. If Blood issue at either the Ears, Nose, or Eyes, about the height of the Disease, it is a mortal Sign. White, pale, crude Urine, is always a bad Omen. If the Appearance of fatal Symptoms suddenly change to a more favourable Aspect, it is a dismal Prognostic. In a Word, the Prognostics of Fevers are to be taken from the Intensity of the Symptoms, and the Parts they affect; always the more noble, the more dangerous.



C H A P. IV.

Of Inflammatory Fevers, especially the Pleurisy, Peripneumony and Quinsy.

E have observ'd in some former * Discourses, that there must be a Disposition to, before there can be a Generation of a Disease; and this holds good in all that Variety of Diseases that invade our Constitutions, and this Disposition of Body favouring Diseases, is that Intemperature or Weakness of any particular Part, whereby it yields to the Disease incident to that Part, for while every Part makes equal Resistance to the Invasion of the Causes, every Part will equally repel the Causes, and consequently every Part will equally remain under a sound State of Health.

IN all Inflammatory Fevers, therefore, it is evident, the Inflammation, for the most part, follows the Fever, and is the Consequence of the Blood's dividing, faster than it can be discharg'd by the Cutaneous Emunctories.

NOW so long as the Capillary Arteries can widen their Diameters to receive the Blood, and give it a Passage, so long can no Inflammatory Fever arise in the Body. The over-great Divisions of the Blood, in this Case, will only cause a simple continual Fever, of which in the former Chapter; but, if, by the over-great Divisions, the Blood suffers in such Cases, it should obstruct in any Part, that Obstruction will cause a Stagnation

* Vid. Chap. 8. Part 1. Chap. 9. Part 1.

of the Fluids, in the Vessels, where it happens, which, if not immediately dispers'd, will excite an Inflammation, receiving the Denomination of this or that Disease, according to the Part wherein it is lodg'd.

IF the Obstruction falls upon the *Pleura*, Inter-costal Muscles, or Diaphragm, it assumes the Name of a Pleurisy, if upon the Membranes of the Lungs, a Peripneumony, tho' by several Authors of good Credit, both these Diseases are express'd by one compound Term, *viz.* *Pleuripneumonia*, or a *Pleuripneumony*; which signifies an Inflammation of the Lungs, and foresaid Parts jointly. If it assault the Muscles of the *Tonsils* and *Larynx*, it is call'd a Quinsy. Sometimes it ascends the Face, and bloats it up near the Eyes with a painful Swelling, Inflammation, and great Redness, and then it is call'd a St. *Anthony's Fire*, when it attacks the Nervous Membranes in the sensible Parts of the Arms, Shoulders, Legs, or Joints, then it excites Rheumatism; Sometimes it falls upon the Liver, Spleen, Stomach, and Sweet-Bread, and excites Inflammations of those Bowels, still varying its Name, according to the different Part it is seated in.

BUT as a Pleurisy or Peripneumony is the most dangerous as well as tormenting, so I shall fix upon it for the Basis of this Discourse, and shall only touch on the others occasionally, as they occur in my Way.

THEY that are of a sanguine or hot, bilious Constitution, are most liable to be infested with inflammatory Diseases; and tho' neither Age, Sex, nor Constitution, are entirely free from their Tyranny, yet they most of all invade People of the Age of one and twenty; for between seventeen and thirty is the boundary of Time that

most suffer under 'em. *Sydenham* thinks the Spring the Time, when they are most Epidemical, for then the Blood receives the greatest Change, tho' I have known them very frequent in Winter, especially the Pleurisy.

THEIR Manner of Invasion is much the same as in Acute Continual Fevers, save, that in the Pleurisy, immediately after the Invasion of that intense Heat, that follows the Chillness, their succeeds a most sharp, pungent Pain in the Breast, which greatly hinders Respiration.

THE Pain in a Pleurisy is generally more torturing, being pungent, and as it were pricking with Needles. The Breathing under a Peripneumony is more disturbing, but the Pain less acute. A Cough and Head-Ach are inseparable Symptoms to both, and tho' the Cough is very disturbing, yet I think it is rather a Relief, than otherwise, because it helps to promote Expectoration, a Symptom the most favourable to Nature, when it is laudable, and of most pernicious Consequence, when it abates, or manifestly flags, especially before the Height of the Disease. The Pulse under all Inflammatory Fevers is hard, tight and unequal, from the Glut of Blood which at that Time distracts the Arteries. The Urine is little and thin, pale and watery: In Respect of the Stools, there is no general Rule, for some are costive, others loose, tho' both in Extremes are dangerous.

THE Blood when extracted by Bleeding, appears extremely fizie, with a Scum upon its Surface, and when it has stood to separate, gathers a Film or Flesh colour'd Skin upon it, which Phænomenon the great *Sydenham* suppos'd to arise from the Precipitation of the Febrile Matter. But if we consider the Divisions the Blood suffers, and the extreme Heats that attend Inflammatory Fevers,

Fevers, we may more reasonably suppose it to arise from some little Portions of the red Globules, dissolv'd and mix'd with the Serum, by the Force of the Vessels; which Union constituting a Mass lighter than the Globules, is the last in settling to the Centre, which is the Reason why it always clings about the Surface of the *Craßimentum*.

THE Ancients in general, and many of the Moderns, have suppos'd the Blood to cause Pain thro' its great Acrimony, or extreme Sharpness, ^{The Cause of Pain under Acute Diseases.} vivifying the Nervous Fibres of those Parts, thro' which it circulates; but I know no Necessity for maintaining that Supposition, or why in all Pains we should suppose the Blood to acquire a sharp, acrid, fretting Disposition, when we know by Experience that Pain, even the most Acute, may be produc'd by a Distraction of the Vessels; for all acute Diseases arise from the Greatness of the Pain, and the Greatness of the Pain is caus'd from the Distraction of the Nerves, which are more or less acutely sensible, as the Part wherein it is seated is more or less Nervous, and as those Nerves are more or less distracted with their Fluids. But those Nerves can only be distracted, when the Vessels they compose are too much distended with Blood; and they will be only too much distended with Blood, whenever it divides faster, than the Excrements it parts with can be flung off by the Secretory Emunctories, and, of Consequence, will lodge in the minutest Canals of those Parts dispos'd to receive it, and excite an Inflammation, which, with the great Heat and Thirst that attends it, we call a Fever of the Inflammatory Kind, in what Part soever seated. And this appears most evidently in Inflammatory Fevers that attack the Breast, especially the Pleurisy, that the Disease in the Beginning, or at least a little after the Invasion,

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vasion, is most commonly attended with the severest and most acute Pain, which, in two or three Days, somewhat abates; that is, when some of the smallest Vessels, that suffer'd the greatest Distension, and consequently the greatest Pain, are broke, the others relax, and, of Consequence, the Pain remits, which appears still more clearly from the Spittle's being mix'd with bloody Streaks, after the second or third Day; and what mightily adds to the Strengthening this Opinion, is, that the Method of Cure, or at least that Method which gives the greatest Relief, under the most pressing Symptoms, will best justify this Manner of Reasoning; for we observe, all Remedies applied in Pleurisies, or other Inflammatory Diseases, to give the greatest Relief, that most diminish the Quantity of Blood, that distract the Vessels, and that is, either Bleeding, or a plentiful Breathing.

BUT if those Pains were caus'd by sharp, acid Humours fretting the Parts, it's impossible to conceive, how either Bleeding, or a plentiful Discharge of any other Evacuation, could give such sudden Relief as those, especially the former, in some grievous Pleuritic Pains is known to give, and that almost in a Moment.

Immediate Cause.

THE immediate Cause, therefore, of all acute Inflammatory Fevers, and, consequently, of a Pleurisy, or Peripneumony, arises from a Contraction of the Heart and Arteries, elevated above the Balance of Nature. This over-elevated Contraction of the Heart and Arteries too much fuses the Blood, and causes it to take up more Room in the Arteries, whereupon a greater Clot is determin'd upon the Lungs, *Pleura*, Intercostal Muscles, and sometimes Diaphragm, greater than the Vessels of the foreaid Parts can dispense with, which stagnates, and immediately

ately turns to an Inflammation, that excites all those Symptoms of Fever, Heat, &c. that generally attend a Pleurisy and Peripneumony; and this Inflammation thus lodg'd in the Side, if not timely dispers'd, and rais'd by a laudable Spitting of concocted Matter, effected by plentiful Bleeding and Sweating, the only proper and safe Methods to be us'd in such Cases, sometimes turns to an Abscess, and Matter begins to gather in the Breast, and then it changes its Name of a Pleurisy, for that of an *Empyema*.

A N *Empyema* is a Collection of Puss or Matter *of an Em-* lodg'd in the Breast, most commonly proceeding *pyema*. from the severer Kinds of Pleurisies, when, for want of timely Bleeding, they go not kindly off; but it may proceed from a Wound, Blow, or Bruise, or the Inclination of the Breast to receive a Load of Humours.

T H E Symptoms that indicate this Indisposition *Diagnostics.* a forming, are, great Heat, Pain and Inflammation that disperse not with the Fever, but remit only, as the Inflammation more or less advances to Suppuration. A great Heaviness, with a continual slow Fever, such as attends Chronic Diseases; a weak, quick Pulse, such as accompanies Hectic Dispositions, are inseparable Companions to *Empyema's*, and indeed he will have great Fortune if he escapes; for a Shortness of Breathing, a Dry Cough, and Intense Thirsts, are inseparable Symptoms; he sleeps little, and wastes daily, especially before it is open'd; and the Discharge that is generally made, after the Apertio of the Breast, is hardly to be restrain'd, and seldom leaves the Patient, till it bring him into a *Marasmus*, or downright Consumption.

B U T these Causes, which in some will seize upon the Lungs and Breast, and excite a Pleurisy or

or *Empyema*, in others will fix upon the *Uvula* and Muscles of the *Larynx*, and cause a Quinsy.

of a Quinsy. A GENUINE Quinsy is an Inflammation of the Throat, with a Swelling and Pain of the Tonsils and Muscles of the *Larynx*.

IT is usher'd in with a Shivering, Shaking, and other Symptoms of Cold; a Fever follows, with great Heat, Pain and Inflammation about the Jaws, to which succeeds a Tumour among the Muscles, near the *Os Hyoides*, about the Root of the Tongue; so that if the Disease come to any Height, the Swallowing and Breathing both become extreme difficult, upon which he is under Apprehensions of being strangl'd, by Reason of the Inflammation and Tumor of the *Uvula*, Almonds and *Larynx*: Sometimes Swallowing is wholly impeded, and the Liquids taken inwardly immediately return by the Nose; and tho' this Affection is not so painful as the former, yet is it full as dangerous, for in this the Patient is under continual Apprehensions of being choak'd, if not timely reliev'd.

Cause.

THE immediate Cause of a Quinsy is from the Blood's stagnating in those Parts; the Blood stagnates in those Parts, because the Contraction of the Carotid Arteries is elevated above the Balance of Nature, which determines a greater Glut than those Parts can detach by the Secretory Vessels, upon which a Lodgment is made, which excites an Inflammation, Fever, quick Pulse, and all the foreaid Symptoms.

Prognostics of Inflammatory Diseases. are always dangerous, but in relation to the Parts where they are seated, some are more so than others. Those Inflammatory Fevers that attack the Breast, such as the Pleurisy and Peripneumony,

mony, are very often of pernicious Consequence, and of them, by Reason of the Symptoms attending, some prove more fatal than others. An extreme Difficulty of Breathing, with severe acute Pains, attended with a hard, hollow, dry Cough, after the seventh Day, portend Death near at Hand: On the contrary, if the Cough be never so severe, if a laudable Expectoration follow it, and Breathing be not extremely short, there is Hopes of Safety; but if the Fever retreat upon the Nerves, and a Delirium seize the Patient, it is deadly. A Loosness happening in the Beginning of a Pleurisy is a very dangerous Symptom, tho' a Flux is much safer in a dry Pleurisy than a moist one. A weak Pulse, cold Sweats, and Difficulty of Breathing, all indicate Death near at Hand.

A *N Empyema* is always dangerous, and most commonly mortal, for it often degenerates into a *Pthifis*, especially if it spring from a Peripneumony; if it arise from a Pleurisy it is less dangerous, and by a timely Apertio in the Breast, sometimes the Patient escapes.

THE Prognostics of a Quinif, are to be taken from the Difficulty of Swallowing, and want of a free Respiration: If the Tumor break inwardly, and the Matter fall upon the Lungs, it, for the most Part, proves a deadly *Prognosis*. In a Word, if the Inflammation be not in the Beginning discuss'd, it generally choaks the Patient, or is translated on the Lungs, and so excites a *Pthifis*.



C H A P. V.

*Of Nervose Fevers, or those vulgarly
call'd Malignant.*

AM now come, by the Order of my Discourse, to contemplate the Nature and Cause of Nervose Fevers, of all, the most dangerous, and attended with Symptoms the most distracting to Nature. This Fever often confounds the Senses, perverts the reasonable Faculties, and for a while suspends the Operations of those noble and distinguishing Endowments. It will, therefore, be worth our while, to be very particular in describing its Manner of Invasion, Progress, State, Decline, and final Period, with all its concurring Symptoms, Causes, Changes, and Prognostics; that we may be better appriz'd how to remove its threatening Symptoms, and prevent their too often fatal Effects.

Manner of Invasion. THIS Fever is usher'd in differently, according to the Difference of Constitutions it invades. In some, it begins more mildly, not unlike the Invasions of a simple, acute, continual Fever, and for two or three Days the Symptoms will continue regular: In others, it assaults with all the Rage and Fury of Burning. The Patient is immediately all on a Fire, and the Fever attacks the Brain upon its first Onset, and disconcerts the whole Animal Oeconomy all on a sudden.

THIS latter Manner of Invasion may most properly be call'd the *Causus*, as mention'd by the divine *Hippocrates*. The Heat, Drought and Thirst,

Thirst, are extremely raging, and it assaults the Brain, and by inflaming its *Meninges*, disturbs the rational Faculties, so that the Patient raves with all the Fury of a downright Distraction ; yet, I must confess, I like this Manner of Invasion much better than when it is attended with a *Stupor* ; for under the former Disorders the Pulse, tho' always quick and unequal, yet is always strong.

As the Fevers we have treated upon are incident to Infants, Children, and those that are growing up to Maturity, so these invade us generally between thirty five and forty five ; from which Time the Constitution beginning to break, the Action of the Arteries grow languid, and of Consequence the Blood is unapt to conceive those Disorders it was subject to in our younger Years. The Reason why I call these Nervose Fevers, is, because I believe nothing of a Fever Malignant besides the Plague ; and another thing there is, that Authors are not well agreed what that Word, abstractedly consider'd in itself, signifies.

I know it is generally us'd to express a Fever, where the Blood is highly corrupted, and as it were putrefied. The Blood, doubtless, in highly Nervose Fevers, suffers a very great Putrefaction ; but this Putrefaction is wholly depending on the Motion of the Animal Spirits, influencing the Impulse of the Heart, and Contraction of the Arteries. Indeed, I deny not, but that the Fever I am treating of may be the Effect of Inflammatory Fevers, and especially the Small-Pox, the severer Kinds of which seldom fail to produce a Fever with the highest Degree of suppos'd Malignancy.

THERE is nothing more requisite to turn an Inflammatory Fever upon the Nerves, but to heighten the Impulse of the Heart, and Contraction

tion of the Arteries, whereby the Inflammation may be lodg'd upon the Brain, or its two nerve Meninges, and the Work is done; for, by this Means, the Heart will either be depriv'd of that Quantity of Animal Spirits necessary for its Influence, which will create a *Stupor*, or it will be over-inform'd, from a too plentiful Secretion detach'd from the Brain to every Part of the Body, which will excite that raging Distraction, that often, in those Fevers, attend those of a bilious, sanguine Constitution.

BUT if this be not the Result of another Disease, it generally proceeds from the Disposition of the Season, and then is Epidemical; and we observe even in the Epidemical Seasons, that those that live high, and fare upon high-season'd Sauces and rich Wines, even in this, as in the Small Pox, generally suffer most: And indeed, I am inclined to believe, from the Observations I have made, that most of the Malignancy, attending those severer Nervose Fevers, is more depending on the peculiar Dispositions of the Bodies that suffer, than any productive Causes of the Fever; and what led me into this Way of Thinking, was, several Instances I had observ'd in the Small Pox, that its Symptoms and Consequences are generally much more fatal to Kings, Princes, and Potentates of the World, than to the Inhabitants of poor, mean Cottages; and that they oftener arise to a greater Height, and put on more dismal Appearances in the former, than in the latter; and the same we observe in Nervose Fevers.

AND when we have throughly examin'd their Symptoms, we shall find this no conjectural Supposition, but a solid Truth, supported with the most evident Matters of Fact. Generally, as all other Acute continual Fevers, so these suppos'd

Malignant, begin with a light Shivering or Horror which obliges the Patient to shrug or contract himself, as if chill'd with cold ; to these Symptoms succeed an extreme burning Heat, great Pains in the Head, Stomach, Back, and Shoulders, as in the Small Pox ; a *Nausea* and Inclination to vomit follows ; upon these Symptoms succeed a great Dizziness, Weakness, Faintness, and Disorder of the Spirits : The Patient is, from the Beginning, much perplex'd in Mind, and restless.

THESE Symptoms are all common to the Acute, Continual, and Inflammatory Fevers ; but they all heighten in Proportion as the Fever increases. About the seventh, eighth, ninth, or tenth Day the Scene often changes ; for the Blood, which ought to preserve its Combination, from the Principle of Attraction, by which each Globule unites with itself, and all with the entire Mass, begins to separate by the Force of the Arteries, and to disengage an infinite Number of little Particles, that form those Petechyal Spots of different Colours, according to the suppos'd Degree of Malignity, from whence they are call'd by the Ancients Petechyal Fevers ; for if any Particles of the Blood be separated from the Mass, that is, be driven beyond the Sphere of Attraction, they can never after join with the Mass, because of the Blood's Repulsion ; but assuming to themselves an Attractive Power, they become the Centre of Attraction to every thing that comes within their particular Spheres, which, by the Force of the Arteries, are driven to the Surface of the Skin, where they form those Petechyal Spots which attend the worst and highest Degrees of Nervose Fevers ; and in these the Spots are most generally brown, or inclinable to a blackish Hue, which too often leaves a *Prognosis* fatal enough, in relation to the Issues of Life or Death.

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THE Colour of the Spots are entirely depending on the Impulse of the Heart, and Force of the Arteries ; for if the Arteries are well able to continue the Circulation, they will preserve the Particles from too close Contacts, so that the Spots will reflect a light, florid Red, a Symptom always the most benign in Nervose Fevers ; but if, thro' the Violence of the Disease, the Spring of the Solids be extremely weaken'd, then the Particles composing the Spots will more strongly attract each other, and form the *Macule* of a livid or purple Colour ; but if their Motions be almost entirely destroy'd, then black Spots or Tokens are the fatal Consequence, which is a sure Prognostic of approaching Death, and that a Mortification is a forming.

BEFORE the Spots begin to appear, if any appear, all the Symptoms encrease ; the Tongue begins to grow hard, dry, and black, the Teeth and Gums gather a black, filthy mucous Matter, and Breathing is extremely short, to which follows great Thirst and burning Heat, as if scorch'd ; to these Symptoms succeed continual Watchings, Ravings, and great Disorders of the Brain : In this Case the Eyes stare, and are restless, ever turning here and there ; the Tongue falters, and the Patient catches at the Bed-cloaths, as if he were fumbling for Straws, or catching at imaginary Flies, Gnats, &c. The Urine is limpid, very clear, and but little at Times.

THE Pulse, when the Fever comes to this last Stage, is very quick, languid, and perfectly fluttering. In the Height of this Fever, I have known a large Discharge of Blood by Stool, which gave great Relief, and the Patient recover'd ; but this very rarely happens, and only when Bleeding was neglected at the Beginning. But sometimes

a Hemor-

a Hemorrhage breaks out at the Nose, Eyes, or Ears, which seldom fails to destroy the Patient in a few Hours.

THUS far I have mechanically accounted for the Manner of Invasion, as also the Symptoms that constitute the Nature and Essence of Nervose Fevers, and in all this Reasoning, we can perceive no manner of Malignity fix'd upon the Blood and Spirits, nothing that can discompose the Harmony of their natural Motions, but what must proceed from the Impulse of the Heart, and Contraction of the Arteries, highly elevated above the Balance of Nature.

BUT what should cause their Contractions thus inordinately to exceed their just Balance, is the next important Question we are to enquire into; and that can proceed from nothing but a preternatural *Stimulus* apply'd to the Heart, which arises from an additional Force added to the natural Quantity of the Blood, depending on the Variations of the Weather obstructing the cutaneous Emunctories, or at least so altering the Evacuations, tho', it may be, imperceptibly to us, as to amass a preternatural Load of unfriendly Juices.

THIS additional Load of unfriendly Juices obliges the Solids to redouble their Contractions, which break, dissolve, and fuse the Blood to such a Degree, as to disengage its Texture, and the Connection of its Globules, not only with one another, but with the entire Mass, whereby each becomes a central Point of Attraction to itself, and attracts all the Juices near it, or within its own Sphere, which form those *Macula* that appear in diverse Parts of the Skin, especially in the Face, Neck, and Breast of those that are severely handled with the most malignant Kinds of

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Nervose

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Nervose Fevers. And as a Mortification sometimes attends those Fevers in the last Stage; so it behoves me to say something to the Nature and Cause of a Symptom that never arises, but is a deadly Presage.

THE indelible Characters that indicate a *Sphacelus*, or Mortification, are a Coldness of the Part, Want of Motion and Sense, to which we may add Blackness, with a Redness all around it. Now those Symptoms demonstrate, that as far as the Blackness extends the Mortification reaches, and that the Inflammation encircling it, is a Collection of stagnant Juices, ready to undergo the same Fate, if not timely prevented. A Mortification, therefore, is only a Deprivation of Motion in both the Solids and Fluids, which Deprivation of Motion causes that Numbness, Want of Sense, and Coldness, inseparable to this Malady, and of which the Burning or Cauterizing can create no Pain.

THE Air most generally is the remote Cause of Malignant Fevers, and then they are Epidemical, and a general Disease; it is apt to disturb our Blood and Humours with Fevers of a dangerous Aspect, when, for any considerable time, it has continued in the same Point; for wanting its Stream or Current, it will be apt to corrupt; for stagnant Air will as easily putrefy, as stagnant Ponds; for by Motion only is every thing in Nature preserv'd from Putrefaction. This is the Reason why *Turkey* and the Parts adjacent are so infested with Plagues, and other Malignant Diseases, because the Air, settling in the same Corner for the greatest Part of the Year, loses its Current, and by that Means acquires an infectious *Miasma*, which destroys frequently both Men and Beasts; but, I must confess, the peculiar Modifications of those Atoms, that constitute those

those Qualities in the Air, that become thus hurtful to our Constitutions, is a Scrutiny too deep for me to enter upon at this time, and therefore shall leave that Subject to be handled by some abler Pen.

As to what concerns the Prognosticks, all Malignant Fevers are highly dangerous, but some in a higher Degree than others, by reason of the Symptoms attending. An inordinate, contracted, fluttering Pulse is most commonly mortal; for it indicates that the Contractile Powers of the Solids are shatter'd and almost destroy'd, and that a Mortification will speedily form itself, in some remote Part of the Body. Raving is not dangerous, unless it turn to Dotage; for then there is great Cause to fear, lest, if he recover the Fever, he should continue the Distraction. Contractions, Convulsions, and Tremblings of the Members, are deadly; for these shew, that the Brain is greatly affected, and that Nature is over-power'd by the Quantity of the Disease. It is a most dangerous Presage, if the Patient catch at imaginary Flies, Gnats, or fumbles, with his Fingers, the Bed-cloaths. Sneezing is a laudable Design, if it be frequent, during the Height of the Disease. Heart-Burning, Hickup, and extreme Loathing in the Beginning, prognosticate that the Disease will come to a great Height. A high-colour'd Urine is always preferable to that which is clear, pale, and watery.

A LOOSENESS in the Beginning is often of pernicious Consequence; but a critical Discharge upon a Crisis, often changes the Appearance of Things for the better. If Spots appear, the more laudable their Colour, especially if they strike out freely, the safer; a light, florid Colour is always the most favourable Prognostick: If

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they appear Livid, Blue, or Purple, it is dangerous, and if Black, it is a mortal Presage, for the Reasons I have given above. The Hand trembling when the Pulse is felt, denotes Danger; but a foul Tongue, ghastly Countenance, and Eyes sunk, prognosticate Death near at hand; tho', after all, there is no Prognostic so fatal, but that, I believe, some have been known to escape it.





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THEORY
O F
PHYSICK
A N D
DISEASES.

P A R T III.

C H A P. I.

*Of Chronic Diseases in particular, or those
that affect our Middle Age.*

Of Costiveness.

HUS far we have proceeded to examine into the Nature of Acute Diseases, their Manner of Invasion, their Seat, several Causes, and Prognostics, which now brings me to discourse of Chronic Diseases; and we shall find 'em to derive their Origin from a Cause quite opposite to the former; for, whereas their immediate Cause

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consisted in the Elevation of the Solids above the Balance of Nature, whereby the Fluids were too much divided;

ON the contrary, all Chronic Diseases derive their Origin from the Impulse of the Solids being depress'd beneath their proper Balance, upon which Depression the red Globules, or fibrous Parts of the Blood too much attract each other, and form preternatural Cohesions, which excite many and various Diseases, according to the different Parts affected, and as those Parts are more or less dispos'd to receive the Impression.

To this State of the Blood and Vessels we owe all those stubborn Chronic Head-Achs most complain of, as also those spurious, vulgarly call'd Bastard Pleurisies, Peripneumonies, and Quinsies, which the judicious *Sydenham* suppos'd to arise from a Precipitation of Phlegm lodging upon the *Pleura*, Lungs, or Throat; and to this Head we may reduce those obstinate *Schirrus's* of the Liver, Spleen, and other Bowels, which in Dissections we often observe to happen, and of which I shall more clearly treat, when I come to handle those Subjects.

AND as, for the most Part, a loose Belly attended those acute Diseases in their highest *Stadium*, in case Bleeding was omitted in the Beginning, and a plentiful Breathing was not procured during the Continuance of the Disease, so in those Chronic Indispositions I am about to treat of, a costive Belly is an indelible Character; and therefore as in the former Acute Diseases, I was careful to premise a Chapter or two of Vomiting, and the Nature of Fluxes, by way of Introduction; so here I intend to take the same Method, and prefix a Chapter concerning the Nature and Cause of Costiveness, as a preliminary Discourse to the following Diseases.

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As younger People, Children, and Infants are very much harrass'd with Vomitings, Fluxes, and a loose Belly; so those advanc'd to Age, and during its Progress, we generally perceive to labour under Costiveness; a Symptom, if not a Disease, very disturbing and perplexing to Nature; and as it often infers great Damages to the Constitution, if obstinate, and of long Continuance, so does it demand a particular Attention in explaining its Nature and Cause.

COSTIVENESS is a preternatural Affection of the Bowels, wherein the Excrements are defective, that is, voided slower than the Course of Nature requires they should be; for whereas a healthful Body, and one that lives freely, ought to ease Nature once a Day, or at least twice in three Days; on the contrary, they that labour under Costiveness, have not the Benefit of Nature this Way once in three, four, and sometimes five or seven Days, which for the most part proves of dangerous Consequence.

IT generally ushers in that wandring, erratic Fever we are to treat of hereafter, and is an inseparable Companion to most Chronic Diseases, especially the *Hypochondria*, all which it greatly exasperates. Its Effects are most obvious in inveterate Head-Achs, which in younger People sometimes turn to the Epilepsy.

THE Diagnostics are discover'd, evidently, by the Want of Stools, by Pains of the Head following upon that Defect, from burning Heats of the Hands, wandring Pains in the Bowels, and belching of much Wind from the Stomach, which sometimes is discharged with great Noise downwards; the Patient has frequent Inclinations, as in a *Tenesmus* attending Fluxes, to go to Stool, but cannot void any thing but Wind, and which I

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think for that Reason may properly enough be call'd a dry, as the other a moist *Tenesmus*. The Excrements, when come away, appear in little Hurtles like Dogs-Turds, are little in Quantity, and scarce digested, and are made with great Pain and Distention of the *Rectum*, even sometimes to the tearing of its Sphincter, upon which follows several Drops of Blood; and from this Origin very often springs that painful Distemper we call the Piles.

THE Cause of all Costiveness arises from the Peristaltic Motion of the Guts depress'd beneath the Balance of Nature. The Cause of the Peristaltic Motion of the Guts being under-balanc'd, is either from the Defect of the Bile, or its over-great Viscidity. The Cause of its Defect, or over great Viscidity, arises from the Slowness of its Secretion; and the Slowness of its Secretion depends upon the Nature of the biliose Juice separated in the secretory Glands of the Liver, thither brought from the Spleen by the *Vena Porta*. The Spleen therefore, of all other Bowels, is the most concern'd in producing Costiveness, as also the *Hypochondria*; for the Action of the Spleen depending on the Contraction of the Splenic Artery, more or less fuses or spiritualizes the Blood, as its Contractile Powers are more or less near its proper Balance, whereupon the Bilious Salts disengage from the Blood, that, in their Passage by the *Vena Porta* to the Liver, they may more commodiously attract each other, for the forming the Matter of the Bile; and as the Blood comes from the Spleen more or less thinn'd, subtilized, and divided; so do the Bilious Salts in their Passage more or less attract each other; so is the Secretion by the Hepatic Glands more or less Volatile; so is the Impression it makes upon the Intestines, in order

order to excite their Peristaltic Motion, more or less natural, upon which depends the slower or quicker Descent of the Excrements, as also their Defect, which gives us the Idea of Costiveness, or a bound Belly.

FROM what we have deliver'd concerning the Nature and Cause of Costiveness, it will be easy to bring the Prognostics into a very narrow Compas. The Consequences of Costiveness, if of long Continuance, are always dangerous; and the harder the Excrements are when they do come away, still the worse; for in such Cases there is great Danger, lest it turn to an obstinate Cholic, or the Iliac Passion. If great Quantities of Urine be made during a costive Belly, it is a good Sign, especially if it go off again, upon two or three loose Stools, from taking a loosening Medicine. If under a severe costive Belly the Urine taste insipid, and appear clear, limpid, and watry, it is a dangerous Symptom, and indicates, certainly, that the Patient not only at present labours under the Vapours and *Hypochondria*, but, if not timely prevented, will shortly fall into either a Consumption, or, at least, some Chronic Indisposition. If a dry *Tenesmus* affect the Bowels, it is a Sign that the Excrements have got pretty near the Fundament, and that, in this Case, a softening, oily, relaxing Clyster will be of great Service in giving Ease to the Intestines, and helping to unburthen the Bowels of the oppressive Load.

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THE CHOLIC & COLIC,
OR, A TREATISE ON
THE NATURE AND CAUSE OF THE CHOLIC,
AND COLIC PAINS.

C H A P. II.

*The Nature and Cause of the Cholic, and
Cholic Pains.*



WHEN Costiveness is very obstinate, and of long Continuance, it is apt to create severe Diseases, as we have more clearly observ'd in the preceding Chapter, but none more painful to the Intestines, than the Cholic; and tho' several Authors have taken a great deal of Pains to distinguish this Disease into several Classes, yet I very much Question whether the several Divisions observable in Authors, have any other Difference than what arises from the different Constitutions of those it invades.

THUS we observe the Phlegmatic Person most subject to the Windy Cholic, the Sanguine to the Biliose, which, indeed, from what I have observ'd, is not so properly a Cholic, as that Species of Fluxes we call the *Cholera Morbus*; for I lay it down as an indisputable Axiom, that all the several Species or Kinds of Cholic Pains, ought to have a costive Belly preceding their Invasion, as an inseparable Symptom; for if a Loofness accompany the Cholic, I call it a griping Loofness, or a Loofness with griping Stools, and treat it accordingly. That which attends Histeric Women during Histeric Paroxysms, is indeed grievous, and sometimes intolerable; of this Kind, is that which Dr. Sydenham calls the *Clavis Histericus*, and which draws the Pain as it were into a Point,

Point, and there excites a boring Pain so exquisitely racking, that a Sword struck to the very Bone, could not create greater Torture.

THE *Iliac Passion* I look upon to be a Species of the Cholic, where the Pain is in the last Degree racking. It is by the *Arabians* call'd, *Miserere Mei*, from the exceeding and inconceivable Torture the Patient labours under, which is attended with obstinate Vomiting, scarce appeasable by the Administration of the best Medicines.

IT proceeds from the inverted Order of the Intestines, when the Peristaltic Motion of their Fibres, instead of descending, ascend again into the Stomach, whereupon most of their Contents are ejected by Vomit, and in very grievous Cases I have known the very Excrements return by the Mouth.

IT is attended with great Costiveness, and a Retraction of the *Anus*, which proceeds not from a twisting of the Guts, but most generally, if not from a Mortification, from a *Hernia Intestinalis*, which frequently happens, when, by any Accident of Vaulting, Jumping, &c. the Membranes of the *Peritoneum* are rent, which suffers any of the Intestines to slide into the *Scrotum*.

THE Cholic is a Disease that invades all People from nine or ten, to sixty or upwards, and is incident to all Constitutions, all Climates and Seasons of the Year, tho' most frequent about the Autumn and approaching Spring.

IT is generally usher'd in with a rumbling *Diagnostics.* of the Bowels, Flatulencies, and the breaking of much Wind, both up and down, which are the preceding Symptoms that give Notice of its coming. These are follow'd with a *Languor* of the Spirits, and great Anxiety of Mind, especially in those subject to Hysterick Fits. By and by the Pain

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Pain begins to rage, which in some moves from Part to Part, and is sometimes more before, sometimes more behind, otherwhiles higher, then again lower, now in the Back, then in the Belly or Sides, in all which Turnings and Windings it is much reliev'd by Discharges of Wind either from the Stomach or Intestines. In others it is more fix'd and excruciating; and in some I have observ'd it contracted into a Point, but so excessively racking, that an Awl struck to the Bone could not create greater Torture. This often happens in the Fits of Histeric Diseases, when the Symptoms invade the Bowels. In some again it is more mild, varying its Symptoms according to the Difference of Constitutions it meets with, being habitual to some, and only accidental to others, invading 'em once or twice upon eating something extremely disagreeable to the Stomach.

THE severer Cholic Pains attending Histeric Women, sometimes terminate in the Iliac Passion, if not solv'd by the Appearance of the Jaundice; for tho' the Jaundice is a very dangerous Disease of itself, yet it's a good Presage, when it comes upon one that is much worse, and attended with Consequences much more fatal. And thus I have observ'd the Histeric Cholic assaulting a Lady with all the Rage and Fury of its Symptoms for full three Months, at last happily leaving her upon the Approach of the Jaundice.

Parts affected.

By the Consent of all Authors, this Disease is seated in the *Colon*, and that deservedly; for in this Intestine are many *Valves*, which may create those Stops or Gluts of Excrements which, stagnating, generally give Foundation to this Disease; besides its Anfractuous Windings and Number of

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Glands

Glands no where in all the Guts so numerous as in the *Colon*, plainly point out this as the most general Seat; not but that any other of the Guts may be affected, as the *Ilium*, from whence the *Iliac Passion* takes its Name and Origin, and which is only the severest Cholic, as we have above most clearly demonstrated.

Most Authors suppose the various Symptoms of this Disease to arise from sharp, austere, acid Humours, or a viscid Bile, fermenting with the Pancreatic Juice, and which distending the Intestinal Membranes, create all those variety of Pains that attend the Cholic. But I think there is no Necessity always to fall in fermenting Humours to cause Pain, if we can prove, that Pain, even the most Acute, may be caus'd without them. And as in the Chapter of Pleurisies I have endeavour'd to account for Pain from the Divisions of the Blood distracting those tender *Fibrilla* of the *Pleura*, without any Erosion of the Membranes; so now being come to speak of Pains from another Origin, I shall beg the Reader's Patience till I explain the Nature of Pains arising from the Contraction of the Vessels depresso'd beneath the Balance of Nature.

We all of us know that the Blood is a soft, smooth, viscose Fluid, whose compounding Particles are capable of being divided, thin'd, or rarefied; for I will not quarrel about the Use of Words, so we can agree upon their Meaning. The Instruments of their Division are the Impulse of the Heart, and Contraction of the Solids, but when frequent Debauches, or a high Way of Living, or inordinate Passions have impair'd their Force, and weaken'd their Springs, the Impressions they make upon the contain'd Juices, will be more languid, and, of Consequence, the red, fibrose

Of the Nature and Cause of Pain arising from the Depression of the Solids beneath the Balance of Nature,

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brose Particles of the Blood will cohere, attract each other, and go into less Compass, than when the Blood divided to the full natural Dimensions of the Vessels, and upon this Account the void Spaces will fill with Air; and this is the Reason of that Windyness we perceive constantly to attend Chronic Diseases, especially those subject to the *Hypochondria*, or the severer Degrees of Melancholy; you may sometimes hear the Wind break off their Stomachs in such Rifts, as is almost enough to set a Windmill a going. Now this thick windy Blood thus brought by the Mesentery Arteries for the Nourishment of the Intestines, must, of Consequence, in Part, gain Admission into the Guts by the Glands, most numerous in the *Colon*, by whose Contraction it must rarify, and break upwards or downwards as it can find a Vent, and excite that Noise of Belching, or &c. according to the Course it takes; but if thro' Costiveness it can get neither Way, then by extremely distending the Membranes of the Bowels, it causes excessive Pains, and the other Symptoms that constitute the Nature and Essence of this Disease.

FROM this over-thick Blood, and Distention of the Intestines, arise those Gluts or Stops in the Fibres of the Guts, which sometimes affect the inner Membrane with an Inflammation, which causes those severer racking Pains, attended with an obstinate Costiveness, and which, if not timely reliev'd, ends in a *Sphacelus* or Mortification, which causes that highest and last Degree of Cholic Pains, vulgarly call'd the *Iliac Passion*.

Prognostics. WE are to draw the Safety or Danger in Cholic Pains, from the Mildness or Severity of the Symptoms, and Length or Shortness of their Continuance. All Cholic Pains that move from Part

to Part, prognosticate Safety to the Patient. But if there be a Retraction of the *Anus*, with an obstinate Costiveness and vehement Pain, it threatens the *Iliac Passion*. The Cholic is commonly fatal to Children, old People, Child-bearing Women, and those that have been long harrass'd with Chronic Diseases: An habitual Cholic is much more difficult to cure, than the accidental. If a Fever with Delirium, cold Sweats, Vomiting, and the Hickup accompany the Cholic, it is generally mortal.

C H A P. III.

The Nature and Cause of Intermittent Fevers.

INTERMITTENT Fevers and Agues are some of the first Disorders that assault the Blood, after the Solids are brought beneath the Balance of Nature.

I SHALL not think it worth my while to run a Division and particular Chapter upon the Difference between Agues and Intermittent Fevers, since they are of the same Nature, and both have the same productive Causes, only in Agues the Viscidity of the Blood and Relaxation of the Vessels are greater, than in Intermittent Fevers. Add to this, that in all Agues the Nerves are more relax'd, which makes the Shivering and Shaking, on the first Invasion of the cold Fits much greater: The hot Fits in Intermittent Fevers being much more inconsiderable, in as much as there is a lesser

Quantity.

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Quantity of obstructing Juices to evacuate; besides, in Agues, the cold Fits always precede, which generally follow in Intermittent Fevers.

INDEED these Distinctions would be needless, were both curable by the same Medicines, and one and the same Method; but I deny that they will, for I speak by Experience, and have observ'd great Disorders to happen on the preposterous Use of Medicines; that is, upon endeavouring to cure either of these Diseases by the same Medicines; for we ought always, in the Cure of Diseases, to vary the Method, according as different Symptoms shall arise, and take Care at the same Time, that the Cure be proportion'd to the Cause; for that which will cure an Ague, will over-do an Intermittent Fever; for a greater Viscidity of the Blood, and, of Consequence, a greater Relaxation of the Solids being necessary to produce an Ague, it will follow, that a greater Power must be apply'd, in order to divide the Viscidities of the Blood, and restore the Tone of the Vascular System: And this is the Reason, why very often in the Cure of Agues by the Bark, we lock up the obstructed febrile Matter in the Blood, by our too early bracing the Solids, before suitable Evacuations have preceded; for in all Agues we ought to join with the Bark, when we give that Medicine, *Nervines*, that is, such Medicines as may restore the Nerves; therefore in all Agues the most generous, Spirituous Medicines best agree with most People, even the younger, altho' in almost all other Cases they prove pernicious.

Manner of Invasion. INTERMITTENT Fevers generally invade People with a Yawning, Stretching, and Listlessness; to these succeed a Shivering and Shaking, which, as in a continual acute Fever, is follow'd with a burning Heat, that continues a greater or lesser

lesser Time, in Proportion as the febrile Matter is more or less in Quantity; and as the Forces necessary to divide it and fit it for Evacuation are firmer or weaker; now the proper Instruments of the Blood's Division being the Solids, as soon as they have destroy'd the Viscidities of the Blood, and fitted it for a freer Circulation, the Fever goes off, either in warm breathing Sweats, or the cold Fit succeeds, which being ended, the Intermission ensues.

THIS Vacancy from the Fits continues so long, till Matter enough is amass'd in the Blood to produce another, which has the same Manner of Invasion, Progress, and Decline with the former; and so, thenceforward, once in a determin'd Time it acts the same Tragedy, and by this Means extreamly ravages the Strength and Constitution of the Patient, until it bring him into a Cachetic Habit of Body, in which Case it often excites the Jaundice or Dropsy, and sometimes terminates in Atrophical Decays, Wastes, and Consumptions, and then the Fever turns to a Hectic.

AN Ague has the same Original with an Intermittent Fever, save, that it is more violent, and generally holds the Patient longer, and is more difficult to cure, being that it strikes more deeply upon the Nerves. Indeed Intermittent Fevers, as well as Agues, are wont to put on various Shapes in different Persons, and that the hast'ning or prolonging of the Fits do entirely depend upon the Solids, suffering a greater or lesser Relaxation. And this, observe also, that whatever Indisposition or Disease the Patient was subject to before the Invasion of the Fever, that Part where the Indisposition is lodg'd, will be the Seat of the Paroxysm. And this we frequently observe in Periodic Head-Aches, Vomitings, Cholic Pains, Nephritic Paroxysms,

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Paroxysms, all of 'em, as exactly suited to the Nature and Cause of this Disease; their Periods as regular as any Intermittent Fever can be, and scarce yielding to any Remedies so readily as the *Cortex* assisted with other proper Medicines.

THE Reason why any particular Part incident to a former Disease, is generally the Seat of the Paroxysms of Intermittent Fevers, is, because the Vessels of that Part is either straiter or more depress'd beneath their proper Balance; and, of Consequence, the Viscidities affecting those Parts will be greater, and the Obstructions resulting therefrom, will make greater Resistance to the Impressions of the Solids, which must create a greater Heat and Disturbance, in order to break and dissolve the Cohesions of the Blood, and disengage those Parts from the Obstructions.

Immediate Cause. IN my Treatise on the Stone and Gravel, *Page 102. Sect. viii.* in accounting for the Fits of Chronic Diseases, I have endeavour'd to prove 'em the Efforts of Nature, to unburthen her self of that Load that oppresses her; and in accounting for the Nature of the Fits of Intermittent Fevers, I shall endeavour to explain what I mean by those Efforts of Nature.

THE System of the Solids, we observe in all Chronic Diseases, and consequently in Intermittent Fevers and Agues, to be under a State of too great Relaxation. The Consequence of this is, that the Particles of the Blood will attract each other, and form preternatural Cohesions, which will be too gross to pass the Perspirable Glands; and by this Means the Quantity of the Blood will be increas'd by the additional Quantity of the Perspirable Matter, added to the natural Quantity of the Blood, from the Obstruction of the Perspirable Glands, arising from the Contracti-
on

on of the Solids depress'd beneath the Balance of Nature.

Now this additional Quantity of the perspirable Matter added to the Blood, will increase its Quantity, and an increas'd Quantity will press with greater Force upon the Heart and Arteries, and, of Consequence, not only raise their Contractions to their just Standard, but above it, which Elevation above their natural Balance produces a Fit, or what we call a Paroxysm.

THE Endeavours of Nature, therefore, can be nothing but the Contraction of the Solids redoubling their Force upon the contain'd Fluids, in order to divide their Cohesions, destroy their Viscidities, and, of Consequence, to remove the Fit.

ALL the Difference there is between a continual Fever and intermittent, is, that upon the Removal of the former, the Solids retreat within their proper Spheres, while in those that are intermittent, they go beneath their just Standard.

IN Acute Fevers, whenever the immediate Cause ceases, the Fever entirely ceases; and the same we observe in the Paroxysms of Intermittent Fevers; but in these latter the proximate Cause remaining, the Viscidities of the Blood will renew, which thenceforwards, the Contraction of the Solids remaining evenly the same, they will in the same Space of Time suffer the Fluids to acquire such Cohesions as will amass an equal Quantity of Matter, sufficient to produce another Fit, and so on; from the Solids not varying their Contractions the Fits come to be regular, at certain determin'd Distances of Time, which regular Distances of Paroxysms, denominates the Fever a *Quotidian, Tertian, Semiterian, or Quartan, &c.*

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THE proximate Cause of intermittent Fevers is owing to an obstructed Perspiration, arising from a low, foggy Air, which too much relaxes the Solids; and this is the Reason why those Fevers are always so ripe about the Spring and Fall of the Leaf, because at those Times the Spring of the Air is most relax'd, and attended with dampy Fogs. Indeed it would scarce be believ'd, were it not easily demonstrable, that when the Clouds hover thickest over us, the Air should be lightest, or at least produce the lightest Impressions on our Bodies.

Prognostics. AN Ague and Intermittent Fever have both dangerous Prognostics, tho' of a different Nature. In the former, if it continue to withstand the Administration of the most generous Medicines, there is great Danger of its ending in some deplorable Disease, as a Cachexy, Dropfy, or Consumption; one or other of which it never ceases to effect, when of very long Continuance. On the contrary, an Intermittent Fever sometimes falls upon the Nerves, and excites Chronic Rheumatisms. In others it attacks the Brain, and appears with malignant Symptoms, which generally end in Death.

IF an Ague anticipate its Fits, it is a dangerous Prognostic; the longer the Interrissions the better, and the more irregular the Returns of the Fits the safer: If they keep constantly to their stated Periods, it is a dangerous Sign, and argues it will be of an obstinate Nature.

C H A P. IV.

Of Slow, Erratic, or Wandering Fevers.

S the Scene of all acute continual Fevers is acted in the Blood, so those erratic, wandering Fevers, of which I intend to treat in this Chapter, are deriv'd from the same Original, tho' from a different Cause: For acute continual Fevers arise from the Contraction of the Solids, elevated above the Balance of Nature, but these slow Fevers from their Contractions depress'd beneath their just Balance: The former suddenly invade, soon come to their Height or Crisis, and if Life be safe, as speedily decline. These have no formal Periods, but arise or go off as different Diseases arise, or as the same Disease gains Ground, or declines.

THIS Disease invades the Body with obstinate Costiveness, to which succeeds Heats in the Palms of the Hands, which are mightily exasperated towards the Evening, or after a plentiful Feeding: When this Fever has been of some Continuance, it creates Head-Aches, twitching Pains in the Sides, which come and go, wandering Pains like the Rheumatism in the Legs and Arms, Shoulders and Back, which are sure to afflict the Patient, if he expose himself to the cold Air, or too much indulge himself in his Manner of Living; great Distensions in the Hypochonders, with a grumbling in the Bowels, and frequent belching of acid Wind from the Stomach. These Symptoms cause great Uneasiness and Anxiety of Mind,

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which are attended with a Weariness of the Body; and an Unaptness to Motion.

THE Legs seem weak, feeble, and scarce able to bear the Body: The Appetite is sometimes very good, and the Patient will often have an Inclination to eat more than he can digest, which huffs up the Stomach, and obliges it to bear hard upon the descending Branch of the *Aorta*, that often is the Cause of that Drowsiness, which frequently attends us after a full Meal; as also those Flushings in the Face, and Shortness of Breathing: The Pulse is frequently low, quick, and languid: The Urine in the Beginning, little differs from that of one in a sound State of Health, but in Progress of Time, it appears to cast a white, muddy, and always a troubled Sediment. As the Day declines, and Evening comes on, the Fever always encreases, which abates and goes off in the Morning. This Fever generally attends the Scurvy, Vapours, and *Hypochondria*, and as the Solids more or less relax, and form other Diseases, it attends 'em also, and is more or less exasperated; till at last it changes into a perfect Hectic, which inseparably accompanies Wastes, Decays, and Consumptions. This is the Progress it makes, always lurking in one Part or other, and changing its Shape and Intenseness, as different Diseases arise, or as the same Disease is exasperated and gains Ground.

As we have dated the immediate Cause of all Acute Diseases, especially Fevers, from the Contraction of the Solids elevated above the Balance of Nature; so I think the immediate Cause of all slow Fevers attending Chronic Diseases, is depending on the Contraction of the Solids depress'd beneath their natural Standard. This Depression of the Solids relaxes their Force, by which they suffer

suffer the Blood to form Viscidities, that with greater Difficulty pass the minute Arteries, from whence arise these throbbing Pains in the Head, those wandering Pains, frequent in the Breast, as also Rheumatisms in the Limbs.

THE several Symptoms of Pain arise from the Endeavours of Nature to cast off the Load that oppresses her; that is, to divide the Fluids into *Molecule*, minute enough to pass the smallest Artery without Resistance; for it is the Blood's passing with a greater or lesser Resistance thro' the Canals it circulates, that creates those wandering Pains, those intense Heats that constitute the Nature and Essence of this Disease; and as either great Burning, or warm Sweats, generally attend People in Acute Fevers, so cold, clammy Sweats are inseparable Symptoms in those Chronic Fevers, that arise from the Slowness of the Secretion, the Viscidness of the Juices, and Languidness of the Solids, all which cause a partial Discharge of the Evacuations.

THUS far as to the immediate Cause, but the proximate I take to arise from the Stomach, which greatly suffers under all Chronic Diseases, whose Fibres being too much relax'd, cannot make those Impressions upon the Aliment, necessary for its thoro' Digestion, and which is the Reason, that while the Body labours under Chronic Diseases, we generally perceive the Stools hard, black, and scarce concocted, which is a plain Indication that the Stomach is in Fault, and if the Stomach cannot overcome the Meats, in order to the extracting a good digested Chyle, thro' the Weakness of its Fibres, we must conclude, that a greater Burthen will fall upon the Vessels ordain'd by Nature for preserving the due Motion of the circulating Fluids; and tho' the Vessels now and

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then can dispense of crude Chyle without any manifest Damage, yet if the Experiment be too often repeated, it must, according to the Laws of Nature, impair their Tone and Contractions, for no Bowel can continually encounter a Charge above its natural Strength.

THE Stomach may discharge two or three *Crapula's*, and if Care be taken, restore itself without the Assistance of the Physician; but if you always prefs a Load upon it, in Hopes of the like Effect, you will find your self extremely mistaken; so the Vessels may, for once or twice, bear a Glut of Juices, greater than their natural Action can well wield, and may digest and detach the superfluous Load off by Urine, or insensible Perspiration; but if this Practice of Gorging become habitual, they will at last flag, and create all those Symptoms I have rang'd under the Diagnostic Part. But Gluttony of either Kind, is not the only Cause of these slow Chronic Fevers; the Passions of the Mind have a great Influence, as also excessive Venery: All of which, as they meet with Constitutions predispos'd, fail not to produce unhappy Effects.

Prognostics. THE Prognostics of this Fever lie in a little Room. Tastless Urine is ever dangerous, and if clear and limpid, prognosticates the Vapours about to seize the Patient in a very high Degree; but the worst Danger proceeds from the Fear of its turning to a Hectic. Large and free Intermissions are ever favourable to the Patient, yet a greater Regard must always be had to those Diseases it attends, than itself, for it always rises and falls according to the Intenseness of their Symptoms.

And, indeed, am I one of those that have
seen & heard much of the Disease, and



Chap. V. Of the Scurvy.
Of the Scurvy.



A M now come to treat of a Disease, that I know not what to make of ; of a Disease, that, *Proteus* like, transforms itself into all Changes and Shapes, and is not, as most other Diseases, determin'd by any inseparable Characters, whereby we may distinguish any Number of concurring Symptoms, that comprehend its Nature and Essence ; but in unravelling its several Causes and Degrees, we are left to our own Observations in describing its several Pathognomonics, as they best appear, to determine that complex Number of Symptoms that constitute its Essence.

THAT the Scurvy is a Chronic Disease is most certain, and that it is more incident to these Northern Climes, than any other Regions, we have the general Suffrage of all the most judicious Writers that have treated upon this Subject : But the greatest Difficulty I have to encounter, is, where to fix its Boundaries ; that is, where to determine its Beginning and Ending, and what Symptoms are inseparably annex'd to it, without adding to, or diminishing from any other Disease.

IN a Word, after the best Observations I am able to make, concerning its Nature and Essence, I cannot but be of Opinion, that all we have deliver'd in the preceding Chapters of Chronic Diseases, may most fitly be call'd its preceding Symptoms.

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toms, and that give Notice of its coming; and that the several Causes we have assign'd as the Cause of Costiveness, Cholic Pains, and the several Kinds of Chronic Fevers, may rightly enough be said to be the predisposing Causes of this Evil; for an Evil it is, and an Evil of the first Magnitude, that affects Mankind after the sinking of the Solids beneath their proper Standard; and that all the several Diseases we shall separately treat of in the following Chapters are the Consequences of it, whenever it is suffer'd by Negligence to become inveterate; and therefore we must conclude it to begin where these Erratic Fevers end, and to proceed from a something greater Relaxation of the Solids, whereupon there ensues a greater Viscidity to the Blood, and, of Consequence, preternatural Cohesions that will differently affect different Parts of the Body, according as those Parts are differently dispos'd to receive, or be obstructed by 'em.

ONE great Misfortune incident to this Disease, and indeed most Chronic Diseases, is, that it treads softly, and seldom gives any Warning of its coming, till very often it has committed considerable Depredations on the Constitution.

Symptoms. THE first Symptoms that discover its Approach are an obstinate Costiveness, succeeded with a slow Erratic Fever, most conspicuous in the Palms of the Hands, and worser in the Evenings than Mornings, wandering Pains of the Head, wringing Pains about the Breast, Back and Belly, a troublesome, molesting Noise and Rumbling in the Stomach and Bowels, which often end in Flatulencies, and the belching of much Wind from off the Stomach: The Appetite rises and falls strangely, sometimes the Patient is ready to faint away, unless he have immediate Sustenance;

At

At other Times his Stomach is so full, from a Distention of the Hypochonders, that he can eat nothing : With these Disorders at the same Time attend great Faintness, Vapours, disturbing Dreams, and a Weakness of all the Senses.

THESE Symptoms come and go for several Months, and, if neglected, the Solids more and more relaxing, produce another Series of Symptoms, worser than the former.

To this Head I may reduce all those spurious Diseases, most scorbutic Constitutions are incident to, *viz.* The Bastard Pleurisy, Quinsy, Chronic Rheumatism, that affect the Joints, Legs, Arms, and other Parts ; wandring Pains that disturb most People during the Continuance of the scorbutic Affection, and as the Solids every Day fail more and more to exert their Contractile Powers, so the Fluids begin more and more every Day to cohere, and raise new Scenes of Woe to the miserable Patient. Hence arise those Blotches, Bumps and Blaines, that here and there embos the Legs, Arms and diverse Parts of the Body, and which if not timely remedied, often degenerate into cancerose and strumose Swellings, which too frequently, in that highest and last Degree of Scurvy, terminate in that Affection we call the King's Evil, an Evil indeed, and which admits not of any Remedy scarce on Earth, besides the King's Touch.

BUT as, in all Constitutions, some Parts are more weakly than others, so are the Cohesions in those Parts soonest form'd, so are their Symptoms most conspicuous ; the Legs never fail to swell and pit towards the Evening, which disappears in the Morning again. To these Symptoms we may join a constant dry Hectic Habit of Body, appearing by the swarthy Complexion, scurfy peeling of the Lips, Hands and Face, and sodden Counte-

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nance; the Eyes look sallow, dead, and languid; which Symptoms seldom fail to bring on a Phthisical Consumption.

To this highest scorbutic State of the Blood is owing all those cuticular Eruptions, Foulnesses, and Defædations of the Skin, that most commonly generate the different Kinds of Leprosies, Scurfs, Itch, &c. And those Parts are aptest to suffer in this Case, whose Fibres are naturally most compact, and constitute a Part most solid; hence arise those putrid Swellings, and Rottenness of both the Gums and Teeth; which latter are generally black and loose, and chatter in the Jaws like so many Virginal Jacks. A stinking, fetid Breath, when things come to this pass, is an inseparable Symptom; which arises from the Viscidness of the Juices being unapt to Motion, and which stagnating, by Degrees corrupts those Parts; hence spring those phagedenic Ulcers and Ozena's, that very often devour the Nose and Palate, without the least Suspicion of any Venereal Taint.

SOMETIMES this scorbutic Affection is hereditary, and fix'd upon the *Embryo* by the Vices of the Parents; and then it lays the Foundation of future Diseases: Hence arise those strumose Swellings, cancerose Ulcers, King's Evil, and other scrophulous Tumours, that we frequently observe the younger Children to labour under; so that such Weaklings are born apparent Heirs to Pills, Powders, and Potions all their Life-time.

DR. WILLIS has, with a great deal of Judgment, distinguish'd this Disease into a hot and cold Scurvy; but as that Distinction only depends upon the different Constitution of the Body, as it is more or less inclining to the Bilious or Phlegmatic Intemperature, so I shall wave its farther Consideration, and proceed on to unravel the

the Causes of this Iliad of Miseries, so dreadful in its Consequences.

FROM the Chain of those preceding Disorders, which all follow upon one another, as the Solids more and more relax, or give way, I draw this natural Conclusion, that they all arise from the Action of the Solids being depress'd beneath their proper Balance, and so depress'd, as to obstruct the several Secretions in various Parts of the Body: For, as we have observ'd in Chap. VII. Part I. the Balance of Nature is that Centre of natural Motion, to which all the Solids ever tend under a healthful Temperature of Body, and to which State they always endeavour to reduce the Fluids.

BUT if by any means the Spring or Tone of the Solids be perverted, or any ways impair'd, they will sink beneath their proper Centre, and create all those different Viscidities of the Juices, from which the Scurvey, with all its numerous Train of Symptoms, derives its Origin, and which constitute that Ropiness and Rancidness of the Blood Dr. *Willis* admirably well takes Notice of in his Treatise on this Disease, and which by a very apt Comparison he likens to fretted Wines that have lost their Spirits; for the Spirits of the Blood arise only from the infinite Divisions it suffers from the Solids, whereby it is render'd a Fluid high enough exalted to pervade the Origin of the Nerves, by the Mediation of the Glands of the Brain, for the influencing all the animal Actions of the Body.

BUT what should cause the Solids thus to start from their Centre of Motion, is the next important Question I am here to discuss; and that I take to proceed from a vicious Way of Living, whereby their Strength and Action are impair'd;

and

and tho' all the Non-naturals may afford a helping Hand to produce those Disorders, yet are they chiefly owing to a luxurious Manner of Life, which more evidently endamages the Solids, than all the other Non-naturals put together; and this is the Reason why it tyrannizes so much in those Northern Climes, and especially here in *England*, because we indulge more in the Use of Diet, than most other Countries in the World, and because in the Manner of that Diet we use greater Quantities of Flesh-Meats, which, as I shall clearly prove in the Regulation of the Non-naturals, are of all others the hardest of Digestion, and of Consequence soonest wear out the Action of the Solids.

If the Scurvey be recent, and have not greatly ravag'd the Constitution, it may be cur'd, but even in this Case with great Difficulty.

ALL Chronic Diseases are highly to be fear'd in point of Cure; because the Contractile Powers of the Solids being almost worn out, they are hardly restorable; and I have seen this Disease entirely disappearing upon the Administration of the most generous Medicines; and yet some time after creeping out again, and once more assaulting the Patient with all the Rage and Fury of its Symptoms. In old Men it is absolutely incurable; and in young People no Disease can be easier of Cure, if it does not proceed from an hereditary Taint. The greatest Fear is, lest it terminate in some Chronic Disease, as *Phtyfis*, *Asthma*, or *Dropfy*.

C H A P. VI.

*The Nature and Cause of Schirrose Tumours,
arising in the Liver, Spleen, and various
Parts of the Body.*



HE next Step Chronic Diseases take, is, to form preternatural hard Tumours in various Parts of the Body. Indeed, to those Affections, the Liver and Spleen are most subject; yet not so, but that the Stomach, Lungs, and Intestines may suffer, and the Bladder often upon Dissections we find schirrose.

THEY are the Grounds of most other Chronic Diseases, particularly of the Jaundice, the Dropsy, and whatever else affects the lower Belly. It will therefore be worth our Pains, accurately to trace the Manner of their first Formation, because they will open a clearer Method, how we may better illustrate the remaining Chronic Diseases we are yet to treat of.

WHEN the former scorbutic Taints are not timely remov'd, they very often make an obstinate Resistance, and evade all the best After-means that can be us'd for the Recovery of the Patient; so that he begins evidently to waste, and his Habit of Body daily to grow more and more infirm. Under these Circumstances and Disorders, if he perceive a dull, heavy Pain often to affect him on either the Left or Right Side, it is a certain Indication that a *Schirrus* is about to form, in the Substance of either the Liver or Spleen, especially if he

he has been addicted to hard Drinking, and indulg'd freely the liberal Use of the other Non-naturals.

THE first Beginning of a *Schirrus* treads softly, and scarce gives any Warning of its Approach. The Symptom that first betrays it, or gives us any Grounds for Suspicion, is, when the Eye-Balls are encircld'd with a Livid Colour mix'd with Yellow, especially if a weighty Pain be felt on either side the Hypochonders: If on the Right Side, it indicates the Liver; if on the Left, the Spleen, to be the Bowel affected. An Erratic Fever always attends it, and a deep Melancholy settles upon the Spirits, which renders the Patient dull, heavy, and pensive; he is hot, dry, and thirsty. As the Symptoms encrease, he begins manifestly to perceive a hard, schirrose Tumour, with great Weight, to affect him on the Right or Left Side.

THIS Affection happening to the Spleen, *Hippocrates* calls the large Milt; but upon the best Enquiries I was able to make upon the Dissection of a morbid Spleen, and extremely large, could perceive nothing but the Vessels of this Bowel universally obstructed, and the Obstructions distending the Membrane, that invests its Substance, to a Bigness greatly exceeding its natural Extent. In the same Manner are Obstructions of the Liver form'd; and as they more or less gain Ground, so is the Habit of Body more or less swarthy, and of a dark, melancholy Hue.

BUT these *Schirrus's* are not so confin'd to the Liver and Spleen, but that they may affect any other Part so dispos'd to Obstructions; and we often find Tuberclies, or little *Schirrus's* form'd in the Lungs, in the Stomach, and Intestines, and sometimes in the Bladder: And I am inclinable

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to believe, that those *Polypus's* we often find form'd in the Cavities of the greater Veins, seldom in the Arteries, arise from the Languidness of the Blood's Motion in its Return from nourishing the Body; when it inclines most to Cohesions, and its Particles are aptest to attract each other.

BUT as the Liver and Spleen are most incident to those Concretions, so I have chose to confine myself more particularly to the explaining their Nature and Cause, and shall but touch upon the others, as they happen in my way.

THESE hard schirrous Tumours, which in the Beginning appear here and there in the Liver, and sometimes universally obstruct every Vessel, arise from a Viscid Blood circulating thro' its *Parenchyma*, which Viscidness the Blood acquires in the Liver, from the Hepatic Artery, being depress'd beneath its proper Balance; upon which Depression the natural Motion of the Blood is retarded, and acquires a Viscidity, which disposes the Particles to attract each other, and go into preternatural Cohesions, which first form Obstructions in the Hepatic Glands, and after in the smaller Arteries, and lastly in the greatest of all. And as the Time of forming those Tumours is longer or shorter, so is the Disease more or less inveterate, and of Consequence more or less incurable.

THE Substance of the Liver abounding greatly with a *Parenchyma*, renders it less sensible of Pain, from those Tumours that arise in its Substance, from the Congestion or Attraction of Matter; and, of all Parts of the Body, the Liver is most fitly adapted for the forming those *Schirrus's*, because it being a heavy, dull Bowel, and void of Sense from its Want of Nerves, obtains a lesser Action; which is the Reason why the Secretions of the Liver are grosser than any other in the Body.

dy. Hence arises the Viscidity of the Bile, which is at Recrement, more grossly secreted than any other, which, as it more or less entangles with the Blood, will form Obstructions in the Glands, will accumulate much Matter, will form Tumours or schirrous Swellings, which, as they more or less distend the adjacent Parts, will more or less hinder the Secretion of the Bile, which constitutes the Nature and Essence of that Disease we call the Jaundice, and of which I shall treat in the next Chapter.

Thus far we have examin'd into the Nature and immediate Cause of schirrous Tumours arising in various Parts of the Body; but the Proximate depends upon some of the Evacuations obstructed or suppress'd, which in this Case generally arises thro' Costiveness, or a Suppression of Perspiration, whose Procatartic Cause most commonly is owing to a continued Course of a debauch'd Way of Life.

THE Prognostics of Recovery, in those that labour under this Disease, are to be taken from the Length of Time the Affection has been forming, and the Degree of Induration the *Schirrus* is advanc'd to. In the Beginning it is easily resolv'd and dispers'd; but in Progress of Time it is with greater Difficulty remov'd. After the fiftieth Year, a Jaundice happening upon a schitrous Liver or Spleen, always turns to the Black Jaundice, and kills the Patient. If the Liver or Spleen be greatly distended beyond its natural Bigness, there is Danger it may join with the Intestines, or Right Kidney: The Spleen so connected with the Left, I once saw in a Body that died with a schirrous Spleen, which was greatly swell'd above its ordinary Bigness; but the Patient died tabid, and with his Lungs, especially the left Lobe, extreme-

ly wasted. In short, to speak the most favourable, it is a most dangerous Disease, and, in the very Beginning, demands the best Assistance that can be given from either Diet or Medicine, for its Removal: But in those that have contracted it, through a luxurious Way of Living, it certainly is most difficult to cure, because there is no Hopes of obliging 'em to a more regular Method of Diet, and, where that cannot be obtain'd, it will be impossible to restore 'em under such pressing Circumstances, notwithstanding the Assistance of the most generous Medicines.



C H A P. VII.

Of the Nature and Cause of the Jaundice.



HIS Disease is much more frequent of late Years, than it was in more ancient Times, and seems, as most other Chronic Diseases, to have gain'd Ground by our Improvements in Luxury. It is not confin'd to either Age, Sex, or Constitution, but may affect all or any of 'em; if there be a Disposition favouring it, tho' it be most incident to those of a melancholy Habit of Body, or whose Parts are of a weakly Tone and Texture.

IT'S Invasion, as most other Chronic Diseases, depends not upon the Seasons, but is the Result of whatever may hinder a due Secretion of Bile.

THE Parts affected are the whole Habit of Body, but principally the Liver and Spleen, one or both.

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IN tracing the Diagnostics, there are some that give Warning of its coming, and others that indicate the Disease, and distinguish it from all others, and that is the extreme Yellowness of the Countenance, especially near the Eye, of which the White gives the clearest Indication; for as the finest Arteries are spread upon its Surface, so these convey the Blood, charg'd with the Biliose Humour, to its outer Tunic, where, thro' its Transparency, the Yellowness appears to Advantage, more than in any other Part of the Body; for every Part appears more or less ting'd, as the Skin, especially the Scarf-Skin, is in any Part of a finer or coarser Texture.

THE Signs foretelling the Jaundice are, a Yellowness, that always appears first dispers'd round the White of the Eye, accompany'd with great Dulness, Heaviness, and an Unaptness to Motion. To these Symptoms succeed every where an Itching or Tingling in the Skin, which at last discolours it all over with Yellowness, inclining, in most, to a green, most in the Face, with great Anxiety, and Sickness in the Stomach.

THE Body is generally costive, and the Excrements come away in hard Lumps, not unlike *Album Grecum*; for as the Bile is generally overviscid, so can it not pass into the Intestines to facilitate their peristaltic Motion, upon which our natural going to Stool depends; therefore is the Body costive, therefore are the Stools hard and white, from the Slowness of their Motion, or Defect of the Bile.

THE Urine appears high-colour'd, and a Linen Rag dipt in it, is dy'd perfectly Yellow, which Colour it will retain when dry. The Mouth is always bitter, and the Taste of Gall he perceives in every thing he eats: Nor is the Taste only viviated,

tiated, but the Objects before his Eyes appear upon his earnest viewing them, as if ting'd with a pale, light Green. A heavy, dull Pain generally affects the Patient, either on the Right or Left Side; if the Pain be felt on the Left Side, it denotes the Spleen; if on the Right, the Liver to be the Parts affected. Both, generally, where they prove Causes, are schirrous.

If the Jaundice arises to any considerable Height, it is most commonly attended with heavy Pains of the Head, especially in young People of a hot, biliose Constitution, tho'; indeed, that Temperature be least of all inclinable to this Disease; but when so it happens, they are subject to Watchings, disturb'd Sleeps, and are always dispos'd to be feverish. Old People, more advanced in Years, are greatly troubled with Oppressions in the Breast, with great Difficulty of Breathing, Faintness, and the Colour in them is more inclinable to a deep Green, which often turns to the Black Jaundice, attended with all the foregoing Symptoms, only in a higher Degree, which never fails to put an End to their Lives and Disease together.

THE Ancients plac'd the Cause of this Disease, *Cause.* when a Disease *ab Origine*, in the Redundancy of the Bile, if the Yellow; or melancholy Humour, if the Black Jaundice; and the Generality of the modern Theorists, especially *Sylvius*, suppos'd it to arise from an over-high Exaltation of the biliose Salts. But if we diligently attend to the Method of Cure, especially that Method which has best succeeded, we shall have all the Reason imaginable to conclude that this, as most other Chronic Indispositions, arises from the Contraction of the Hepatic Artery depress'd beneath the Balance of Nature, which locks up the Hepatic Glands;

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and suffers no Bile, or, at least, not a sufficient Quantity to pass the *Porus Biliarius*, for the influencing the peristaltic Motion of the Guts ; and this appears still clearer, from its sometimes being a secondary Disease.

NOTHING is more common than to observe the Histeric Cholic terminating in the Jaundice. One Patient I attended, who was seiz'd with it, after he had long labour'd under the French Pox ; and there are innumerable Instances where it has follow'd upon great and dangerous Fevers ; in all which Cases the Solids are apt to relax, and of Consequence recede beneath their just Balance.

A VIPER-CATCHER I was acquainted with in the Country, who, being bit by one of those venomous Creatures, was suddenly seiz'd with the Jaundice, which, that very Night, diffus'd itself all over the Habit of the Body. This so sudden Change and Alteration, could not but proceed from the *Spicula's* of the Venom wounding the Solids, and causing unnatural Contractions, as well in the Nerves as Arteries, whereupon the Blood must disengage the biliose Salts every where in its Circulation ; and Convulsions arise in various Parts of the Body from a preternatural *Stimulus* apply'd to the nervose System.

AND tho' sometimes we observe Infants and Sucklings to be seiz'd with the Jaundice, yet generally they are poor, weakly, puny Creatures, are hereditarily dispos'd to it, and born with the very Picture of Death in their Faces, and even then, for the most part, they well enough encounter with, and a great many escape it ; and the Colour is of a light pale Green, inclining more to a Yellow ; and this proceeds from the Contraction of the Solids being nearer their proper Standard, whereupon they are better able to divide

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vide the biliose Salts, every where floating with the Blood. Children incident to this Disease, are most commonly of a Phlegmatic Constitution, and such, whether young or old, are always dispos'd to have the Contraction of their Solids beneath their proper Balance; and the more depris'd the Solids are in their Motions, the more viscid is the Bile, and of Consequence the deeper is the Colour of the Jaundice; and from this State and Condition of the Bile arise those little Stones, and calculous Concretions, we often find both the Gall-Bladder and *Porus Biliarius* stuff'd with, and which are generated from the Attraction or Cohesion of the biliose Salts forming those Viscidities that obstruct its Passage, upon which it passes the Hepatic Arteries without a Secretion, and is reconducted by the Veins to the Heart, where, by the Impulse of the Arteries, it is driven with the Blood into all the Habit, which it tinges green, yellow, or black, according to the Variety and Intensity of the Disease.

ON the contrary, the more exalted the Solids are in their Contractions, that is, the nearer they are to the Balance of Nature, the lighter is the Colour of the Jaundice; and this Lightness of the Colour is a strong Argument, that the Motion of the Solids can divide the biliose Salts, and consequently fit them for Evacuation through the perspirable Glands, or detach them off by Urine.

AND this Disease will harass the Patient a longer or shorter Space of Time, in Proportion as the Solids, in their Contractions, are higher or lower, and of Consequence as they are more or less able to overcome the Resistance the Blood makes to Division; for the biliose Humour being every where diffus'd with the Blood, will

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every where divide with the Blood, and of Consequence will sooner or later disappear. blood will
 WHEN the Arteries are able well to divide the Blood, the Jaundice will appear of a light, pale Yellow, and continue but a short Space of Time, because the Division of the biliose Humour will suffer with the Blood, will separate its Parts, and render 'em small enough to pass off by some of the Evacuations most natural for that Purpose.

BUT in case it proceed from a *Schirrus* in the Liver or Spleen, or follow upon great Fevers, or any arduous Chronic Disease, or if it be the Result of hard Drinking, or come upon much Grief, Sorrow, or any other of the dejecting Passions, it generally is mortal, especially if the Patient be advanced in Years; for such Causes must argue the Solids highly impair'd in their Contractions, and that the Jaundice must appear of a deeply yellow, green, or black Colour, which last is ever a fatal *Prognosis*, and never fails to bring Death, as the only Refuge of the miserable Patient.

Prognostics. THE Prognostics, therefore, of the Jaundice are to be taken from the several Degrees of the Colour, the Youth of the Patient, and the Strength he has to undergo those other fatiguing Symptoms that always attend it. All Diseases of this Nature, the brighter the Colour, the less Danger. Those that proceed from an indurated Liver or Spleen, are generally mortal, and those that follow upon any great and dangerous Disease, are extremely to be fear'd. If it arise from little Stones obstructing the *Porus Biliarius*, it is absolutely mortal; and from Stones filling up the Gall-Bladder, it generally undergoes the same Fate. That, which appears in Children, in younger People, and in those of a stronger Habit of Body, is always

always safe. If the Jaundice arise from the biting of any venomous Creature, it is a very dangerous Prognosis. In a Word, there is great Fear, in case it continue long, lest it end in the Asthma, Dropsy, or Consumption, in which Cases there remain no manner of Hopes to the miserable Patient.

C H A P. VIII.

Of the Nature and Cause of the Asthma.

 **H**I S is one of the most perplexing Chronic Diseases I have hitherto treated of, and very often is attended with the severest and most distracting acute Paroxysms, that not seldom bring the Life of the Patient into imminent Danger. It will therefore require our greatest Attention, diligently to explain its Nature and Cause, that we may the more clearly inform ourselves of the properest Method of Cure.

THOSE that are of a pale, phlegmatic Constitution, inclining to Obesity or Bloatiness, that have been much subject to Coughs and Rheums, and, in their younger Years, have indulg'd themselves excessively in their Manner of Living, are most incident to the Asthma, especially as they come to be on the Decline of Life.

A U T H O R S have distinguish'd this Disease into three several Kinds, the *Dyspnæa*, *Asthma*, and *Orthopnæa*; which Distinction I think not to any great Purpose, since they only imply the several Degrees of the same Disease, and specify their peculiar Differences. A *Dyspnæa* is the first and easiest,

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easiest, and only proceeds from a slight Affection of the Lungs, such generally attends scorbutic Persons, and may better be term'd a Shortness of Breath, than a Difficulty of Breathing.

T H E Asthma is a Difficulty of Breathing, truly and properly so call'd, wherein the Pipes wheeze and sing at every Expiration; so that, in this Case, you may sometimes hear the hissing Noise in the next Room. This generally proceeds from taking Cold, and is attended with a moist Cough.

A N Orthopnoea is the last Degree of difficult Respiration, in which the Patient labours for Breath with all his Might, and is in the utmost Danger of being suffocated, unless he either sits, or stands upright, with his Neck erected and stretch'd out.

THEY that have been much subject to the former two, never fail of being seiz'd with this last Species, being, that they are in Degree dangerous, as they stand rang'd in Order, and are only three Names, that specify the different Degrees of the same Disease; and, tho' these Differences, we now receive, were first settl'd by the Grecian Writers (*Hippocrates* himself often using the same Words to express the several Degrees of the *Asthma*) who fix'd upon those three Words, to distinguish the several Species, and mark out their distinct Boundaries; yet, I think, the Moderns have run a Division upon this Disease, more agreeable to the Laws of Nature, and the Symptoms that attend it; for by reason some expectorate very much in the Asthmatic Fit, and others but little or nothing, therefore have they distinguish'd it into a Humid or Convulsive, that is, a moist or dry *Asthma*.

T H E Parts affected, in Persons labouring under the *Asthma*, are all those that serve for the Use of

Parts affected.

of Respiration; such are the Lungs, the *Aspera Arteria*, Diaphragm, and intercostal Muscles. That, which arises upon the Dropsy's swelling into the *Abdomen*, we shall consider in the next Chapter, where I shall professedly treat of that Disease, its various Symptoms and Effects, and different Natures.

IT'S Manner of Invasion is very different, in different Constitutions; and we must always take care to distinguish between the Fits and the Disease. A simple *Dyspnea* being that State of the Breath that constitutes the Essence of the Disease, and the *Asthma*, or *Orthopnoea*, that which indicates the Paroxysm.

THE Disease is most commonly form'd before the Invasion of the Paroxysm, and the Paroxysm generally, in this, as in most other Chronic Diseases, is the Endeavours of Nature to dislodge the Oppression; and this is the Reason why the first and last Fits generally are the most terrible, because there is the greatest Quantity of Matter to overcome, especially in the first, and, in the last, the Patient dies, because the Tone and Texture of the Solids are highly impair'd, because the Contractile Powers of the Arteries cannot overcome the Viscidness of the Phlegm, that is, cannot attenuate and divide it, in order either to Expectoration, or a freer Circulation.

THE first Symptoms, that generally discover themselves in the *Asthma*, are a remarkable Shortness of Breathing, accompanied with an oppressive Weight as it were upon the Breast; a dry, tickling Cough always attends this Disease, which much increases towards the Evening. The Habit of Body is always scorbutic, and the Blood ropy. If the Person happens to go up any hilly Place, he panics, blows, and perfectly faints for want of Breath.

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THIS State is most incident to those young Girls, that labour under the *Febris Albus*, or what is vulgarly call'd the Green-Sickness. Upon taking Cold they wheeze, and the Pipes sing in every Expiration; and thus they continue for some time, till a sudden Fit, or Paroxysm attack 'em, whereupon the Lungs are as it were bound down, or begirt with a great Weight, which mightily oppresses the respiratory Organs, and hinders a free Breathing.

THEY immediately rise, if in Bed, and labour for Breath, stretching out the Neck to gain upon the Air, and are every Moment in danger of being suffocated. Sometimes the Patient rattles, endeavours, and strives, but in vain. In these severer Fits the Face grows black, which is a desperate Presage.

To these grievous Symptoms of difficult Breathing, Load, and Straitness of the Breast, which always attend the severer Paroxysms, there often happens a Cough, which, tho' troublesome enough, and sometimes greatly disturbing, yet, unless I am extremely deceiv'd, of real Advantage to the Patient; for in some of the more grievous Fits, I have known the Patient beat his Breast with his Fist, as is usual in the Epilepsy; and in both these Cases, I am of Opinion, it gives 'em some Relief.

UNDER these Circumstances the Pulse is quick, languid, and perfectly fluttering. The Urine pale and thin, in both the Beginning and Progress of the Fit, which, towards the Decline, separates a red Sand, and grows turbid. When Respiration is very short, it puts him into profuse Sweats, which are always of a clammy Nature, and proceed from an over-great Relaxation of the Solids, that sink beneath their proper Standard.

THE Body is always costive during the Fit, and a Stool or two naturally happening, gives present Relief in the severest Paroxysms. At last, after many Fits and much enduring, the Hands tremble, the Strength fails, the Spirits sink, and Death puts an End to the miserable Life of the Patient.

THE immediate Cause of this Disease is owing to a too viscid Blood, arising from the Contraction of the Solids being depress'd beneath their proper Standard. In this Depression, the *Aspera Arteria*, *Arteria Pulmonalis*, and *Vena Pulmonalis* greatly suffer. The *Aspera Arteria*, indeed, is in no Fault more, than as the Viscidity of the Blood obstructs the Motion or Enlargement of its Vesicles, and by that means straints their Passage; for if the Air can get in, and inflate the Vesicles, the Asthmatic finds no Difficulty in contracting the Lungs, in order to Expiration; so that Inspiration, in the *Asthma*, is only impair'd, seldom Expiration, unless the Liver or Spleen in Asthmatic Persons be subject to a *Schirrus*; and in that Case, the Addition of their Weight from the schirrous Tumour, will render 'em more difficult to rise in Expiration, as their Bulk also may on the other hand endamage Inspiration; for we always perceive those Asthmatic that are subject to these Tumours.

INDEED, in some most severe Cases, and in other Diseases, sometimes Expiration is so abolish'd, that the Breast continues elevated, the Neck erect, and the Mouth open for a considerable Time; but these terrible Appearances happen not in any Disease but the *Caralepsis*, of which and its several Phænomena's we have nothing to deliver in this Place.

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THIS Disease may arise from a bad Conformation of Parts, from a natural Straitness of the Breast, which may obstruct the playing of the Lungs, or their natural Expansion. Sometimes the Cause is from little Stones being bred in the Substance of their Lobes; but the most general Cause is viscid Phlegm, stuffing the Vesicular Glands of the Lungs, which the Blood parts with in its Passage thro' this Bowel, whenever the Contraction of the Arteries is beneath their proper Balance.

CHILDREN are very often subject to Shortness of Breath, but they are generally Phthisical, and it proceeds from an Adhesion of the Lungs to the Chest, and is most commonly a sad Presage of their being short liv'd.

THOSE that are subject to the severer Fits of the *Asthma*, such as the *Oribopnea*, have always a light *Dyspaea* attending them, with a hawking Cough, whereby they expectorate, in the Intervals of the Fits, great Quantities of Phlegm, which very much relieves the Breathing; but as the Disease is longer of Continuance, so the Fits return more frequent, and are greatly depending on the Variety of Seasons, and Changes of the Weather.

THE Spring and Fall are Seasons wherein this Disease, even as the Gout, never fails to exercise its Tyranny, especially in those to whom, by Length of Time, it is become habitual.

Prognostics. MANY People lead a tolerable Life under this Disease, and continue several Years without any great Molestation, but it always destroys the Patient at last. In the Beginning it may very easily be cur'd, as well as any other Disease, and when it is become habitual, it may even then be reliev'd, but never throughly recover'd. Inveterate Asthma's

Asthma's are always incurable, and generally end in Dropsies. A disorderly, weak, low Pulse, join'd with an extreme Difficulty of Breathing, for the most part proves mortal. It is more dangerous to old People than young, but worst of all to Children and Infants. To those that labour under the Cachexy or Dropfy it ever proves mortal.

C H A P. IX.

Of the Nature and Cause of the Dropfy.

THIS is the last and fatal Stage, whither all Chronic Diseases tend, if they are not prevented, in their Progress, by the Death of the Patient; and as we daily see Wastes, Decays, and Consumptions following upon Acute Diseases, when they have been very severe; so, not seldom, may we observe those of a Chronic Nature finishing their latter Scenes in a Dropfy; justly, therefore, may we style this the last of Chronic, and the first of Complicated Diseases, since several of its Symptoms are of a Complex Nature.

WOMEN are more incident to the Dropfy, than Men, because of their lax Disposition of Body, because their Solids yield sooner to the Impressions of the Non-naturals, and because they are incident, from many Causes, to have their Menstrues suppress'd, which, in old Maids, and salacious Widows, give a great Handle to the forming the Dropfy.

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Of this Disease Authors have form'd three distinct Species; the *Anasarca*, *Tympanites*, and *Ascites*, or true Dropsey: But after the best Judgment I am able to make, I cannot perceive any other material Difference, than what the Difference of Constitution gives it. If Wind be joyn'd with the Water, and a Sound echo from a slight Tap with the Finger made upon the *Abdomen*, it is then call'd the Tympany. Women, labouring under the Hysteric Disease, are mightily incident to this Kind of Dropsey, in which the Belly is hugely distended, either with Wind alone, or with Wind and Water jointly, that, upon any light Percussion or Pressure made upon it, emits a Sound not unlike a Drum, from which it derives its Name.

If Water and Serum only cause the Distension, it then obtains the Name of the *Ascites*, or true Dropsey. This Kind generally falls upon those at last, that have, for any considerable Time, been severely handled with the *Asthma*. The *Anasarca* is only the Beginning of the true Dropsey, as we shall make more manifestly appear by and by.

But there is another Distinction taken Notice of by Authors, and that is, from the different Parts affected. Thus from the Head's being oppres'd with Water, it is call'd the *Hydrocephalus*; from the Breast, the *Hydrops Pectoris*; from the *Scrotum*, greatly distended with Water, *Hernia Aquosa*; from the Womb, being the Part affected, *Hydrops Uteri*; and so of the other Parts. But the Dropsey of the Belly, whose Nature and Cause we shall only delineate, seldom attacks any till the later Stages of Life, and till the Solids have suffer'd their extremest Relaxation.

The Persons most liable to this Disease are those of a lax, phlegmatic Constitution, subject

to

to Bloatiness, that have long labour'd under the *Asthma*, or a violent, disturbing Cough. They that have fallen into a *Diabetes*, have at last died of the *Dropsy*. Sometimes it follows upon the Jaundice and other Chronic Diseases, especially those that proceed from an indurated Liver or Spleen.

IT is always in the Beginning attended with great Llistenes, Want of Appetite, and sinking of the Spirits. If the Solids be equally impair'd in every Part of the Body, then there ensues the *Anasarca*, which is an universal Bloatiness, and the highest Degree of the Cachexy. In this Case, in the Beginning, the Body equally pits in every Part, and appears as if swell'd every where under the Skin with Wind and Water.

THIS Species not seldom happens to young Virgins of pale Complexions, labouring under the Green-Sickness, and is call'd the *Lencophlegmatis*.

BUT the Beginning of the true *Dropsy*, or *Ascites*, for the most part appears in the Swelling of the Ancles, which, towards the Evening, if press'd with the Finger, retains the Impression, and the Flesh about the Instep feels flabby, soft, and spongy, not unlike a Quagmire: The Patient is uneasy, restless, and feverish; the Breath short, the Urine pale, thin, and but little in Quantity; the Pulse beats languid, weak, and always unequal, varying towards the Evening a little quicker. Under these Circumstances the Constitution appears bloate, and the Complexion fallen.

THESE are the Grounds of the *Dropsy*, which give Notice of its coming, and indicate the Constitution highly scorbutic, and consequently ready to receive any Impression. By and by the Swelling of the Legs encreases, and rises higher into the Thighs; sometimes it invades the *Scrotum*,

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and there forms the *Hernia Aquosa*; tho' this seldom happens till the *Abdomen* is highly distended with Water.

THE Dropsy increasing, ascends into the lower Belly, and often distends the *Peritoneum*, the *Omentum* and Muscles, to an almost incredible Bigness. Under this Dilemma, the three grand Symptoms that most vex the Patient, and always attend the Disease, are an intense Thirst, little Urine, and difficult Respiration; for the Waters, bearing hard upon the Stomach and Diaphragm, greatly obstruct the Playing of the Lungs, and, of Consequence, impede the Freedom of Respiration, whereupon the Patient is extremely harass'd, under the present Load and Pressure, and at last drown'd in a Deluge of Waters, form'd, within his own Bowels.

SUCH are the Symptoms, such the Progress and deplorable State, to which this Disease often reduces the Patient, if not timely remedied.

Cause.

ALL People incident to the Dropsy, as we before observ'd, are subject to Phlegm; and Phlegm is nothing but the *Serum* slowly secreted from the Mass of Blood; that is, when the Solids are beneath their proper Standard; for we perceive, in many Cases, that the *Serum*, thus separated, will coagulate into a Jelly. This I have more than once observ'd in the Legs of dropsical People that have been laid open, when no other Way appear'd of saving the Patient's Life.

IN all Dropsies the Blood is extremely viscid, and apt to divide, and separate the *Serum* from the *Craßimentum*, even as it circulates in the Vessels; for as we have endeavour'd to demonstrate, that the Fluidity of the Blood is depending on the Contraction of the Solids; so in Proportion, as their Spring and Tone are weaken'd, and impair'd,

pair'd, do the red fibrose Globules go into closer Contacts, and forsake the *Serum*, which moving slower, from the greater Resistatice it meets with in the Vessels, is left to stagnate in those Places where the Contractile Powers of the Arteries are least; and make the least Impressions; and they make the least Impression generally, where they are farthest from the Heart, and that is near the Surface of the Body.

AND this is the State of both Solids and Fluids in the *Leucophlegmacy*, *Anasarca* and *Cachexy*, being only, that they consist in Degrees, and are a greater or lesser universal Bloatiness diffus'd thro' the whole Habit.

AND as the Solids are more and more distended, or stretch'd beyond their natural Elasticity, so they are the less capable of restoring themselves, so they are, in their Contractions, the more depress'd, so the Impressions they make upon the contain'd Juiices, are too languid to break their Viscidities; upon which the Fluids separate and increase the Dropsical Humour in prodigious Quantities, not only in the Legs, Thighs and Ancles, but also in the Belly, which sometimes, from the Viscidness of the *Serum*, breaks the Lympheducts, and forms an incurable Dropfy.

THE Ancients suppos'd this Disease to arise from a cold Intemperature of the Liver or Spleen, but we know no Intemperatures, hot or cold, but what must proceed from the different Velocities of the Blood circulating thro' those Bowels, and the circulating Mass will preserve its natural Balance and just Fluidity so long as the Solids preserve their natural Strength and Spring.

IN all Chronic Diseases, the Stomach is the first of the Bowels, that give Way, and when the Action of the Stomach is impair'd, it must lay a

greater Stress upon the Arteries to overcome the Viscidness of the unconcocted Chyle, that escap'd the Impressions of the Stomach, which, in Time, if the Glut be repeated, must impair their Action also, from which innumerable Diseases take their Origin, till at last, it either end in Wastes, Decays, &c. or pave the Way to this, as the final Catastrophe of all his Miseries.

THUS far it appears, that the Solids being relax'd, and their Motions depreſ'd beneath their proper Balance, are the immediate Cause of the Dropsy, and that the Action, as well as Texture of the Solids, are impair'd to a Degree very extraordinary, appears still more evident, from Wounds made any where upon the Habits of Dropſical People.

B L I S T E R S apply'd to the Legs most commonly mortify, which they could not do, if the Solids retain'd any tolerable Degree of Strength to maintain the Circulation. From this Distress of the Solids the Blood separates, and frequently divides the *Serum* from the red Globules, in which State, there is but just Strength enough to continue a languid Motion; all the Parts, excepting the Legs and Belly, which most commonly are immensely swell'd, being under a sensible Decay.

D R O P S I C A L People are generally observ'd to sweat much, but perspire little, which is owing to the Viscidness of the Blood that secretes Excrements too gross to fly off by the perspirable Glands, unless their Orifices be extremely widen'd; and then the perspirable Matter ouzes out in large Drops, that constitute those clammy Sweats which often attend those that labour under the Dropsy.

AND altho' in a Dropsy the Urine is always little in Quantity, upon which *Van Helmont* suppos'd the

the Cause of a Dropfy to arise from a vitiated Secretion of the Renal Glands; yet I think that defect of Urine may rather be said to be the Result of the Renal Glands having lost their Tone, upon which the Serum arnanded to the Kidneys grows so viscid and ropy, as not to be able to pass upon any Account.

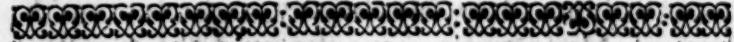
THE remote Causes do arise from whatever has a Power over much, to relax the Constitution of the Solids. The Suppression of any Evacuation will excite the Dropfy, and this is the Reason why Women, generally, are so prone to fall into it, after their *Menses* have left them. Great Passions, deep Melancholy, and a continu'd Series of Misfortunes, have deprav'd the Constitution to that Degree, as to infer a Dropfy. They that for many Years have been Asthmatic, seldom fail of finishing their Days with the Dropfy. It often follows upon severe Acute Diseases, and it is *Hippocrates's* Opinion, that a Flux of the Belly, if it be violent, and of any Continuance, will produce a Dropfy.

FROM these Observations, it will not be difficult *Prognostics.* to form the Prognostics, which most indicate Danger or Safety to the miserable Patient. All watery Tumors coming upon old People are mortal. The Dropfy is to be judg'd, in Degree, dangerous, according to the Advances it has made, according to the Time it has been a forming these Advances, and according to the Quantity of Matter, and the Strength and Age of the Patient. In younger People the Dropfy is frequently cur'd, if the Texture of the Solids is not destroy'd by a vicious Way of Life.

THE Leucophlegmacy, Anasarca and Cachexy, may easily be remov'd, and all future Danger of this Disease prevented, if the Patient

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be but regular in his Course of Medicines, and the Use of the Non-naturals. But the greatest Danger to be fear'd, is, when the Waters swell up into the *Abdomen*, and by great Distentions, break some of the Lympheducts, or Lacteal Vessels, in this Case, it always proves mortal; and even the *Paracentesis*, or what is vulgarly call'd Tapping, will not avail the Patient any farther, than to give him a Respite from his present Misery, for the Waters will accumulate again, and arise to the same Bulk, which, in Time, will unavoidably put an end to his Life and Distemper together.



C H A P. X.

Of the Nature and Cause of Complex Diseases, or those that attend us in the later Stages of Life.

E are now come to treat of those Diseases that attack our Constitutions in the later Stages of Life, and which only are the Result of Chronic Diseases, grown inveterate by Length of Time and Evil Customs.

U N D E R this State and Condition of Body, attended with all those Weaknesses and Infirmitiess inseparable to old Age, do those Diseases of a Complex Nature invade us.

A T I M E indeed, when, by Reason of those Decays of Nature, we are least able to bear 'em; when the bending of the Body, shaking of the Head, trembling of the Hands, ceasing of the Grinders,

Grinders, weakness of the Senses, all prognosticate, that the Silver Cords are loosen'd, the Springs of Nature fail, and that Life itself is drawing to a Period. They, therefore, must argue the highest Depression the Solids and Fluids can arrive at, without putting a Stop to the vital Frame of human Nature ; that is, without entirely extinguishing its Motions.

B U T seeing complicated Diseases are much talk'd of, and very frequent to be met with in Practice, tho' I fear me, not so very well understood ; I therefore shall, for the better Information of the Reader, beg leave here to state the just Difference between complicated Diseases, and simple, chronic Diseases with complicated Symptoms ; for we observe it no uncommon Thing to hear, that such a Person labours under a Complication of Diseases, when, perhaps, upon Enquiry, we shall find it nothing less.

S Y M P T O M S of a different Nature, arising upon the Pressure of a Disease, give it no Title to that of a Complex Nature, but are to be distinguish'd as Symptoms attending the severer Scenes of that Disease, which most properly may be call'd a simple Disease, with complicated Symptoms, and this Distinction the very Nature of Cure, in some Diseases, will justify.

As for Example ; the Water in a Dropsy, of which in the last Chapter, bearing hard against the Diaphragm, shall often impede the Action of the Respiratory Organs, and, by that Means, create a Difficulty of Breathing. Now, in this Case, it can by no Means be call'd a Disease, or genuine Asthma ; nor, in the Cure, must we attempt to relieve it as such, for it is only to be regarded as a Symptom inseparable to the Dropsy, and more or less severe, as the Waters more or less swell into

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the *Abdomen*, and bear more or less hard upon the Stomach and Diaphragm.

IN this Case as you relieve the Dropsy, by evacuating the Waters, you ease the Symptoms of difficult Breathing, for they are always more or less severe, as the Lungs have more or less Liberty to expand their Vessels for the Reception of the Air, as the Stomach and Diaphragm more or less descend in Inspiration, which, in a Dropsy, are always in Proportion to the Waters contain'd in the *Abdomen*.

THEREFORE whatever Medicines will best contribute to the Evacuation of the Waters from the Belly, and prevent their Return, will best enlarge the Playing of the Lungs, will best relieve the Symptoms of short Breathing, and, of Consequence, will contribute most to the Cure of this Disease with complicated Symptoms; that is, the Dropsy.

A BODY may be said to labour under a Complication of Diseases, when there are two or more Diseases absolutely form'd, and existing separately in the same Body, at the same Time. When an Asthma invades the Constitution first, and being fix'd and rivetted upon the Lungs, the Gout, the Stone, the Jaundice, or the Dropsy succeeds, which, in this Case, may most properly be call'd a complicated Disease, and the more of these Diseases exist in the Body together, the more properly may he be said to labour under a real Complication, which will demand different Intentions of Cure.

So it happens many Times, when the Constitution is highly Scorbutic, the Stone, the Gout, the Asthma, and the Dropsy, all attack him at one and the same Time, and with united Force increase his Pains above the Bearance of human Nature,

Nature, and indeed, under such a Complication, I know no Misery upon Earth can equal his deplorable Circumstances, but that of Consequence his Life must very speedily draw to its latest Period, for grievous acute Pains and continual, cannot long be supported, but by greatly breaking of the Constitution, which sooner or later will put an end to his Misery and Diseases together.

THUS far I have gone in settling the Distinction betwixt a simple Disease, with complicated Symptoms, and a Disease, existing complicated in the Body, at the same Time.

THE Order of my Discourse now requires, that I go on to examine into the Origin of complicated Diseases, or how they first invade us, and come to exist in the Body.

THE Manner, in which complicated Diseases form themselves, is not different from the Invasion of simple Chronic Diseases; for whereas the latter proceeds generally from an Obstruction of the Solids in some particular Part, wherein the Circulation is impeded, the Secretions retarded, and the Action of that Part impair'd, from the Solids being depress'd beneath their proper Standard, so complicated Diseases invade the Body, from diverse Organs being obstructed, wherein the Actions of those particular Parts are impair'd, from the Balance of the Solids being depress'd beneath their just Standard.

INDEED in all Bodies, as some Parts are weaker than the rest, so in these will the first Depressions of the Solids happen, which will excite a Disease of that Part, or to which that Part is subject; and this proves the Foundation, or Ground Work for all the rest to build upon: Thus arise schirrous Tumors in the Liver and Spleen; thus the Asthma, which, in Progress of Time, brings on the Rheumatism,

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matism, Gout and Dropfy, all which I have known to exist complicated in the Body, at the same Time.

IN this feeble State and Condition of the Solids, when the Motions of the Vessels are universally depress'd, arise all those Symptoms of Decrepitness, that never fail to croud in upon the Constitution, when old Age has brought us near the Verge of Life. Hence arises that Viscidity of the Blood, which detaches such a large Discharge of Phlegm by the Respiratory Organs, upon Coughing or Hauking; a Symptom inseparable to old Men. And this we generally observe, that most People, greatly advanc'd in Age, are of a Phlegmatic Disposition, let their Temperature have been what it will in their younger Years; and this proceeds from the Vessels being reduc'd to a State fitting to secrete that Humour in greater Abundance, than in younger Persons.

THEY also perspire less, because the Viscidities of the Fluids obstruct the Cutaneous Discharges, and because the languid Beating of the Arteries cannot divide those Viscidities fine enough for a free Passage; and they are subject to Stranguries also for the same Reason, a Symptom which our great Master *Hippocrates* takes Notice of in his third Book of Aphorisms, *Aphor. 31. Seniles Morbi*, as a Character inseparable to old Men; and yet, unless extreamly indulgent, they seldom grow bulky, because little of their Aliment goes into the Mass of Blood, but descends with the Excrements by the Common-Shore, and for this Cause they often labour under Fluxes, especially the Lientery and Cœliac Affection. They are also subject to the Palsy, to the Megrimus and Melancholy; and these all proceed from Defect of Animal Juices in the several Organs of the Body.

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IN this State and Condition, that I may point out old Age, with all its Infirmities and Distresses, whether natural, or owing to the Violence of Diseases, the Senses Decay, *viz.* the Organs of Hearing, Seeing, Tasting, Smelling and Feeling, all are mightily impair'd, because the Animal Spirits are defective, because the Nerves, their proper Instruments of Action, are relax'd, and lastly, because the general Frame of the Solids, and the several Organs they compose, and the Actions they perform, are greatly endamag'd, and, of Consequence, unable longer to carry on the Concerns of Life; upon which we justly say, that a Body thus reduc'd and labouring under all the *Languors* of Nature, and harrass'd with Diseases, must be near the Point of its latest Period.

AND thus Death makes its gradual Approach, when attended with a Disease, till at last, by an Obstruction of some principal Organ, a universal Stop is put to all the Springs of Nature.

BUT if, in the later Stages of Life, no Disease attacks the Constitution, but what is incident to the Infirmities of old Age, a Supposition not impossible, then all the Solids will preserve an equal Springiness, then the whole Mass of Blood, in all its Parts, will consist of equally fluid Particles, and Nature, in this Case, will continue her Motions constant and regular, till the latest Period, when the Body full of Years shall fall, like the ripest Fruit in Autumn, a willing Sacrifice to the King of Terrors.

ALL complicated Diseases are dangerous, and so *Prognostics*, dangerous, that it would be Madness to attempt a thoro' Recovery; so that in the fifth Part, where I treat of the Cure of Diseases, I consider 'em under the Title of the Palliation of Incurables.

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How ridiculous therefore is it in some, who aver they cannot cure 'em, because of some Contraindications that arise from different Symptoms, that obstruct the Progress of their Attempts; for we cannot cure 'em, because they are in their own Nature incurable, because the Solids cease to be able to influence the Fluids; and this brings us to a very material Question, and that is, *Why the Solids cease to be able to influence the Fluids?* and to this I answer, Because they are form'd of Matter in its own Nature perishable, because they are in a continual Flux, of daily Wasting and Repairing, because, in the later Stages of Life, the Expence of Wastes is larger than the Additions receiv'd for the Repairs of these Wastes, and, therefore, we are to enquire how old Age may be longest kept off, and it will appear to be best protracted by those Means that will best preserve the Balance of the Passions, and keep 'em even.

THE Reason and Grounds of the Decay of our Nature, arise from the continual Gluts we daily charge in upon her, which weaken her Springs, and impair the Constitution of the Solids.

THE Body of Man is an excellent Piece of Mechanism, as I prov'd, or at least endeavour'd to prove in the former Part, and the Solids, on which the whole Frame is supported, as all other Matter, are the worse for wearing, and, of Consequence, they give Way, and in Time quite wear out.

THAT the Vessels grow thinner, as we advance in Years, is evident from the Veins of very old People, that receive a deeper Red from the Blood, than what appears in the Vessels of younger People.

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THE very Action of the Solids, therefore, plainly indicate their perishable Nature, but the more or less we overstrain 'em in their Actions, the sooner or later will they decay ; and the more Acute Diseases we encounter with, during our Times of Youth, which are inseparable from the Elevation of the Solids above the Balance of Nature, the more Chronic Diseases shall we encounter in the Decline of Life, and the sooner will that Decline come upon us, and, of Consequence, the sooner will our Life draw to a Period.

AND thus I have run thro' the several Parts of this Discourse, as far as they relate to the Symptoms, Cause and Effects of Diseases ; and, tho' in speaking to each Head, I have rather given short Hints than an absolute History, yet whoever will carefully attend to that Chain of Consequences drawn all along from the Connexion of the whole, may observe several Things, not unworthy his Perusal.



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THEORY
OF
PHYSICK
AND
DISEASES.

PART IV.

Of the Cure of Diseases in general.

C H A P. I.

Introduction to the Cure.



N the first Part of this Treatise, I have been ample enough in unravelling the Laws of Motion, the Mechanic Principles, upon which the great Wheel of Nature is carry'd on, and how the Accretion is perform'd in the several Parts of the Animal Oeconomy; and, as in treating of Diseases, I have consider'd the Cause and Effect of all the most perplexing

perplexing Maladies, whether Acute, Chronic, or those of a Complex Nature; so here I shall take Notice of the most minute Circumstances, in order to restore the Animal Oeconomy to that just Standard of Health, or that Freedom of Action it enjoy'd before the Invasion of Diseases.

THESE things premis'd, I shall go on to recapitulate, as briefly as I can, what I deliver'd in the former * Parts, concerning the Cause of Diseases, or the Variation of Nature from that just Standard or Balance it has given to support it.

THIS Balance or Evenness of Constitution, is that Centre of Motion that preserves the Body whole, entire, and free from all Disorders; and it consists in the regular Motion, Temperature, and Mixture of the several Solids and Fluids, that compose the Mechanism of our Bodies.

WHO SO EVER, therefore, has perus'd the first Part of this Treatise, must remember, I, in the Beginning, divided the Body into two distinct Masses of Matter, *Solids* and *Fluids*; that, to the former, I give the Direction of the latter, and to the Heart I assign the Influence of both; and the Air I endeavour to support, as the Spring that not only sets the whole Machine agoing, but what governs and supports it, in all its various Motions during Life.

ENQUIRIES of this Nature, naturally enough, led me to consider the Origin of Diseases, their Beginning, Progress, and Difference, as also their several Causes, Symptoms, and Effects; nor, in that vast Chain of Thought, which the Difficulty of the Subject naturally led me into, am I conscious, that I have omitted any useful Observations or Ex-

* Vid. Chap. VII. p. 49.

periments,

periments, that might serve to illustrate the whole Theory, whether they related to the Nature of the Air, the Method of Diet, or the Influence the rest of the Non-naturals have, in disposing our Bodies to receive the Impressions of Diseases; for it conduces mightily to a successful Cure, that all these Things should be clearly known, plainly laid down, and exactly determin'd, seeing, that by this Means, we survey more distinctly, and comprehend with greater Exactness, the respective Causes, Natures, and Dependencies, Diseases have one upon another.

AND the Result of all our Reasoning upon these Points, is, to reduce 'em to Practice, that is, to form such Rules and Indications, as may help us more successfully to perform their several Cures, for little avail all the most ingenious Theories, unless they help us to more clear and distinct Ideas of Diseases, and render us more expert in Practice.

ALL the Success we can reasonably expect from our Practice, depends entirely upon the Justness and Verity of our Theory; and ten thousand Experiments will serve but the more to perplex our Enquiries, if the Principles, upon which they are founded, be not evident and clear; for in this Case, if they stand upon a solid Foundation, the Deductions will be natural, and the Consequences support the Physician in his Applications; and tho' he should be so unfortunate as to lose his Patient (and who can prevent Death in all Diseases?) yet, if he timely prognosticate the real Danger attending the Disease, he will come off with Honour, and have the Satisfaction, of having done his Duty, for the Rescue of his Patient's Life.

PHYSICK is one of those great Blessings, *The Dignity which the Providence of Heaven has been pleas'd of Physick,* to confer upon Mankind, for the Relief of those personal Afflictions frail Nature is subject to; and the Physician is Nature's profess'd Servant, and therefore should be always ready, with seasonable Remedies, to assist her under any Distresses she may fall into, thro' the Violence of Diseases.

A PHYSICIAN, therefore, if I define him right, is one, who, being perfectly acquainted with the Laws of Nature, knows how to act for the Interest and Security of the Constitution, knows how to protect her from the Insults and Encroachments of Diseases, and, lastly, knows how to remove the Diseases that fix upon the Body, and embarrass and overturn the Temperature of both the Solid and Fluid Masses. He is the Guardian of Health, and the Restorer of Tranquility to the Body, when its Organs are obstructed, and their Action impair'd or oppress'd by the Violence of a Disease.

THE Office of a Physician, therefore, is an Office of Trust, and that as high as can be conferr'd upon Mankind, as it is the Means, when rightly applied, of attaining Health, that invaluable Blessing, without which, all the Riches, the Honours, and Glories of the World, cannot create him any solid Satisfaction; for, whatever we set in Balance with this Habitude of Health, it will be found of that superior Advantage, as to outweigh all other earthly Considerations: For what avails the greatest Estate, or most pompous Affluence to him, that, for Want of Health, cannot relish the Pleasures of 'em; that is either ty'd down to his Bed, or so infirm of Constitution, as not able to enjoy the Satisfactions they afford him?



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IN this, therefore, the Nobleness of Physick excels all other Arts and Sciences, as it is conver-sant about Objects of the highest Importance to Mankind; for what is a Crown, a Diadem, or the Imperial Purple to the mightiest Prince, if lan-guishing under a Fever, or distress'd with the raging Torture of the Gout? Pains are as intolerable on a Couch of Tissue, as on a Flock-Bed; and Diseases of all Kinds bear full as hard upon the Lord and General, as the meanest Beggar, notwithstanding the Vastness of Distance their Circumstances may set 'em at.

NOW the Physician is set for the Relief of those Diseases, Mankind, by the unavoidable Laws of Nature, is subject to fall into; and he has all the Reason, that can oblige a worthy Mind, to be just to his Character, and the Dignity and Honour of his Profession. Nor can Heaven or Earth afford stronger Motives for Virtue, for Diligence, and the other Endowments of a generous Mind, than to make him the Instrument of so much Good to Mankind, in relieving the Infirmitieis and Miseries of human Nature.

EVERY one, who employs the Physician, entrusts not only his Constitution, but Life, under his Care; and he is oblig'd sometimes, by the Severity of his Disease, to lay open those Secrets, that are highly improper to be entrusted with vulgar Ears. It will, therefore, require all his Tenderness, Industry and Zeal, to discharge this important Trust with a becoming Grace; and tho' no Physician ought to be answerable for the Events of Diseases, that depend upon a thousand Contingencies, not in his Power always to remedy, yet he is accountable to his own Conscience, and the High Tribunal of Heaven, for any Failures, that may happen thro' his Negligence, Want of Attendance, or undue Applications.

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THE Divine *Hippocrates*, justly supported the *Character* Character of the greatest Physician the World ever ^{of Hippo-} knew, and he was a real Ornament to the Profession. ^{crates.} Nor Honours, nor Riches, could bribe his great Soul, to do a mean or unworthy Action; and all the Glory of the *Persian* Court, with the noble Dignities that were offer'd, could not prevail with him to abandon his Country.

THIS brave and disinterested Conduct of his, so endear'd him to his Countrymen, that, in Recompence for so great Fidelity, they rather chose to expose their Island of *Cos* to a dreadful Ravage, threaten'd by the powerful King *Artaxerxes*, upon his Refusal, than to deliver up such an invaluable Blessing.

I N E E D not take Notice of the high Honours, that were conferr'd upon him by the Senate and People of *Athens*; how they crown'd him with a Diadem, and maintain'd him and his Family at the Publick Charge, since these things all stand recorded in the latter Part of his Works, as standing Monuments of his singular Wisdom and Virtue.

N O R was he only great and amiable in his personal Virtues and Character, but his Writings have stood the Test of the most learned Pens for above these two thousand Years; nor were they ever impugn'd, that I know of, by any, but those that understood not the Depth of those Subjects he treats of; and tho' all his Works are excellent, yet in two Points is he inimitable, viz. in describing the Diagnostics of Diseases, and forming a *Prognosis* of their Events. He could not only tell the Issues of Life and Death to a very great Certainty, but, from the different Dispositions of Seasons, was most happy in prognosticating what Diseases would be Epidemical at such and such Times; as

he exactly foretold that raging Plague, that so terribly infested *Athens*, to the Wonder and Surprise of all the World. In those two great, and absolutely necessary Branches of Physick, did he chiefly excel, which got him a Name great and reverend thro' all Antiquity. And Dr. *Freind*, that Ornament of the Profession, has done the World a signal Piece of Service, in publishing his Commentaries upon his first and third Books of Popular Diseases, both as they are genuine, and as they contain all the most valuable Pieces of his Practice, in Relation to Fevers.

INDEED, such noble Instances of Virtue are less numerous in this degenerate Age; yet some there are, that square their Lives and Conduct according to the Example of this illustrious Original; and pity it is! there are not more of the same Character, that dare to serve their Country, in the Honour of the Profession, without a Bribe.

ALL I would insinuate by this Digression is, to remind the genuine Sons of Art, of the Dignity of their Profession, and how much it is fallen from that Glory and Lustre it was formerly possess'd of, when Kings and Princes thought it no lessening of the *Regalia*, to condescend to the Practice, as well as Study of this most noble Art.

*The Cha-
racter of
Quacks.*

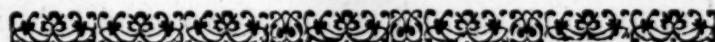
BUT now its Fences are broken down, and high Inroads made, by every Quack, upon a Profession, that, for many Ages heretofore, was held inviolably sacred; so that Men begin no longer to esteem it as a Science, but an Art, or rather a Fraud, to gain Advantage by.

AND there are not wanting some with dignified Titles, who both privately give Umbrage, and themselves publickly in their Writings, countenance this Empirical Practice.

WHAT is this, but to do a little, mean Action with a great Countenance, to Quack with Authority, and clandestinely endeavour to bully People into a Belief of Impossibilities ?

THEY are Quacks, they are Empyricks, who, upon all Occasions, cry up their own Medicines, their own Specifics, their own *Arcana*, and publish Books to tell the World, that no Physician understands the Cure of a Flux, but themselves; who revile their Betters, and cure the Disease by sending the Patient into the other World.

BUT this ungenerous Practice, I have, in the most ample Manner, clearly expos'd, in the Introduction to the second Part of my *Treatise of the Stone and Gravel*, to which I refer the Reader; and shall go on to examine into the Cure of Diseases in general, or that Benefit they receive, in point of Cure, from a right-regulated Course of the Non-naturals.



C H A P. I.

A Regulation of the Non-naturals.

SECT. I. *Of the Air most agreeable in Diseases.*



HEN I consider'd the several Parts of *of the Air*, a human Body in particular, and how they govern and direct their several Actions, I took a View of 'em, in the first Place, as they were free, and unaffected with any Disease; after that, I consider'd them under a State of Violence from Diseases, and clearly demonstrated, that the Non-naturals, alone,

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were the first Cause of all those Disorders, that affect our Constitutions ; and as those great Changes are entirely owing to their Abuse, so I shall endeavour to prove, that, when rightly regulated, they fail not to produce happy Effects, in removing those Ailments, our too liberal Use and Indulgence of 'em had created.

ANCIENT Physicians laid the utmost Stress upon their Influence, and their Use prov'd so visibly efficacious, in the Cure of most Diseases, that some were bold to assert, that a right regulated Temperance would cure all Diseases, without any farther Assistance ; and, I must confess, if the Patient obtain the Benefit of a healthful Air, if he is regular in his Diet, and moderate in his Exercises, he will find his Sleeps natural, his Passions calm, and all the Evacuations regular ; in which Case, all the several Springs of the Animal Oeconomy will easily be reduced to their perfect Plight and Balance.

THE Air is the first of the Non-naturals I shall treat of ; and as, in the former Parts, I have been prolix enough, in describing how the different Gravities of this Element, and its several Variations, of hot, cold, dry, and moist Intemperatures, cause Diseases ; so, in this, I shall endeavour to explain, what Qualities of this Fluid will have the greatest Influence on Bodies, in order to restore 'em to that Freedom of Action they possess'd before the Invasion of Diseases.

BUT before we can be able to form a right Judgment of the Benefits expected from the Qualities of any particular Air, it will lie upon us to be well appriz'd, in the first Place, of the Constitution of the Patient, and the particular Distemper he happens to labour under.

IN all, or most Acute Diseases, the Nature of the Sickness will scarce suffer the Patient to remove for the Benefit of the Air, and therefore is he oblig'd, in such Cases, to continue in the same where he resides, till the Violence of the Malady is, in some Measure, abated; and the greatest Relief, in such Cases, is to be expected from a fine, clear, light, balsamic Air, on a Ground rather rising, in a champaign Country, but free from Mountains, Woods, and fenny Bogs, or any thing else, that may intercept the free Breezes of this pure Element.

WE always observe, that after the severer Kinds of the Small Pox, Inflammatory, as also Nervose Fevers, an Airing mightily avails in restoring the Strength of the Patient, by raising the Contraction of the Solids, greatly broken thro' the Violence of the Disease, to their due Balance; and by that means it often prevents Decays, Wastes, and Consumptions, the too frequent, unavoidable Consequences of Acute Fevers.

IN this Case, the Air acts upon the Constitution, by bracing the Solids, and enabling 'em to cut and divide the Viscidities of the Blood, whereby it restores the Strength and Vigour of the Body.

A DRY, clear, light, cold Air, such as most commonly attends moderately frosty Seasons, provided there be no Weaknesses, attending any Part, is admirably assisting in the Cure of scorbutic Habits, the Melancholy, and most Diseases of a Chronic Nature, provided, I say, there be no Weaknesses upon any Parts; for I have frequently observ'd this Variation of the Air, extremely to affect those troubled with old Gleets, whether Simple or Venereal; and because about Spring and Fall the Air suffers the greatest Changes, so, a-

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bout those Times, these Gleets have flow'd in excessive Quantities, and given great Uneasiness to the miserable Patient.

BUT we need not be surpriz'd, in accounting for the Phænomena of these Gleets, if we consider the vast Quantity of Air, that at one Time presses upon our Bodies more than at another; so that if any Part of the Body be at such Times subject to any Infirmitiy or Weakness, the Extremes of Weather will greatly affect those Parts; that is, they being weaker than the other Parts, will give Way to the same Pressure, that other Parts of the Body, being sound, will insensibly sustain; for certain I am, that strong, hale, robust Constitutions perceive no Alterations by the Changes of the Air, because their Bodies are equally and alike sound, and make equally and alike Resistance, to the Variations of this Fluid, in every Part.

BUT those of an infirm Constitution, whose Solids are of a weaker Texture, and subject to old Aches or Pains, can, without the Assistance of the Barometer, foretel any great and sudden Changes of the Weather.

IN all Decays, Wastes, and Consumptions of the Atrophical Kind, and without an Ulcer of the Lungs, a pure, sweet, open Air, moderately cold, and free from high Hills, great Mountains, or lofty Woods, that may intercept its pure Nitre, and take off from its Spring, is preferable in the Cure of those Diseases; and if the Ground be rather rising, such as at *Hampstead* or *Highgate*, so much the better; and those Grounds are always best, where the Soil abounds very much with pleasant Flowers, whose fragrant Particles the Nitre of the Air will not fail to attract, and convey 'em, in pleasing Sensations, to the Brain, and Faculties

Faculties of the Senses; for the Air of all Climates extremely abounds with the Virtues of those Plants or Flowers where it comes, and must, of Consequence, convey not a little of their healing Qualities to those Bodies it environs.

IF we a little consider the Nature of that Sense, by whose Means we judge of the different Odors of Bodies, we shall perceive it to be nothing but the most light *Effluvia's* those Bodies continually part with, which are attracted by the Air, and communicated to the Olfactory Nerve, by whose Mediation they strike the Brain with Sensations more or less agreeable, according as the Body, from whence they were emitted, smells more or less pleasant.

THE Brain and Lungs receive the greatest Benefits from the Air; for by its vibrating upon the Nerves of the former, it revives all the Faculties of the Senses, and renders our Spirits brisk and lively. In the latter, by passing into the Lungs, it affects the Blood-Vessels, and, as a *Stimulus*, quickens the Contraction of the Heart and Arteries, whereby it encreases the Velocity of the Blood's Motion, and of Consequence its Secretion, in every Part of the Body.

A MODERATELY warm Season is most agreeable to Hectic Dispositions, or such as labour under a *Phtisis*, or Consumption of the Lungs; for since there is no Cure in such Cases, we must endeavour to give the best Relief we are able, and draw Life out to the latest Period of Time.

IN all Diseases where an Ulcer attends, a sharp Air is ever observ'd to be pernicious; for it over-raises the Contractile Power of the Solids, and encreases all the natural Secretions; and altho' by that means it may greatly help to dissolve the viscid Cohesions of the Blood, yet it will, at the same

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same time, naturally encrease the Cough and Fever, if not endanger a Loofness, and raise such an intestine Motion among the Juices, as will not a little incommode the Patient : Therefore a moderate Heat will be best, and what the Season will not afford, we must endeavour to procure by Art.

INDEED, in the midst of Summer, and in sultry Weather, I scarce think any Air can be too cold, and therefore the Patient may take the Advantage of what Place pleases him best, and where he finds Company most agreeable to his Temper, Genius, and Disposition, *Hampstead, Epsom, Highgate, &c.* And in all other Diseases with Acute Paroxysms, as the Stone, the Gout, the Asthma, &c. it is the same, when the Season of the Year chimes in with both the Constitution and Distemper together.

BUT in all foggy, moist, mising Weather, such as labour under any of the foresaid Disorders, will perceive great Inconveniences ; for it mightily lessens the Spring of the Air, and, by that means, very much sinks the Action of the Solids beneath their proper Balance : Hence arise those Disturbances of the Spirits, that Drowsines of all the Senses, and those wandering Pains that generally, at such Times, affect different Parts of the Body.

THE Qualities, of our native Air, especially of that wherein we were born, are highly considerable, and, in my Opinion, preferable to all others, be their Properties what they will ; for, I believe, few will prefer the Air here in *London*, as the most agreeable to Asthmatic People, yet I am acquainted with a Gentlewoman, that, being a Native here, and going into the Country to live, in Process of Time contracted an Asthmatic Indisposition, and, ever after, scarce could, in any Places, be so easy as in this City.

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THE Spring, of all other Times, is the Season most proper to restore the Constitution; for then it is, that all Nature begins to change her Face, and put on her new and agreeable Livery. Not only the Woods and Meadows salute our Eyes with the pleasing Prospect of a delightful Verdure, but even the Birds begin to warble out their Notes, and charm our Ears with the sweet Accents of their melodious Musick; all which agreeable Variety is brought about by Means of the Sun's Influence.

AND, as great Changes are wrought at this Time in all the animated Creation, so, in Man, Nature, with all her Endeavours, is hastening a Depuration of the Blood and other Juices, and resolving its Siziness, contracted from the Cold in the foregoing Winter, and, very often, the Conflict they undergo at such Seasons, creates those Agues and Fevers most general about Spring and Fall, and therefore often, by our most celebrated Writers, call'd Vernal and Autumnal Agues.

FOR the same Reason, those that are subject to the Stone, Gout, Gravel, Asthma, or any other Disease with acute Paroxysms, scarce ever fail to suffer a Fit, which is more or less severe, and of longer or shorter Continuance, as they more or less indulge in the Use of the rest of the Non-naturals.

SECT. II. *Of Solid Aliments most agreeable in both Acute and Chronic Diseases.*

THE Grounds of Health, and the Removal of Meats, of Diseases, depend very much upon temperating the Juices; and the temperating the Juices arises from reducing the Solids within their proper Balance,

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A TEMPERATE Diet, therefore, in all Diseases is best, whether Acute or Chronic; for as the Endeavours of Nature are always employ'd in reducing the Solids to a healthful Temperature, which is their proper Centre of Motion, so they ever effect that Point, when their Strength is superior to the Resistance of the Viscidities of the Juices.

BUT as all Acute Diseases proceed from the Solids elevated above their natural Balance, and an encreased Quantity of Blood depending on that Elevation, so the only Cure is a Substraction from that Quantity; and the best Way to abstract by Diet, is, to let it be as spare as possible: And therefore, in all Inflammatory Fevers, Small-Pox, and the Fits of Chronic Diseases, I always prescribe the thinnest and most attenuating Diet, and such as may lay the least Stress upon the Solids to digest; for Nature being engag'd in discussing the Obstructions, can least of all attend to large Digestions.

BESIDES, great Quantities of Meats and Drinks, in such Cases, annoy Nature, exasperate the Symptoms, and heighten the Disease, while a low, spare, thin Diet depresses the Symptoms, softens the Juices, and renders the Contraction of the Solids more pliable.

To this End serve best, Ptisans of Barley-Water, Almond-Milk, Sack Whey, Sage Posset-Drink, and Panada's made of ground Rice, Oatmeal, or Barley. These, or any of 'em, are the properest Food for those that labour under any Acute Disease, and will soonest remove the Disorder, by substracting from the Cause.

CHRONIC Diseases, on the contrary, one would think, from their very Nature and Cause, should admit of a more plentiful Manner of Diet;

yet,

yet upon a full Examination we shall find, that, even in them also, a spare Diet is greatly to be insisted upon; for the Cause why the Solids want informing, is, because their Contractile Powers are impair'd; and they suffer that Distress most commonly, if not from the Relicks of some Acute Disease, from a Glut of Juices charg'd upon the Solids greater than they can wield, which being often repeated, in Time destroys their Texture.

HOWEVER, in most Chronic Diseases, it is the Opinion of all Physicians, both ancient and modern, that a more plentiful Diet may be indulg'd, yet so, that the Meats taken for Nutrition, and the Reparation of those Damages, be of a light and easy Digestion.

HUNGER hath Relation to solid Meats, and is that Appetite by which we are invited to desire Aliments necessary for the Nourishment of the Body; and, among all that Variety the Providence of Nature has been pleas'd to give us for our Support, we shall find those most nourishing and restorative, that lay the least Stress upon the Solids, and require the least Force from the Impressions of the Stomach, in order to overcome the Resistance they make to Division.

THE most simple Meats for Food are Roots, Herbs, and Fruits; most of these consisting of a lax Texture, are easily separated and converted into Chyle, and tho' they nourish less, yet they give a Firmness to the Solids, great enough to preserve their Action, as appears in those Countries where they are the greatest Part of their Food, who are generally brisk, vegete, and of a lively Disposition.

NEXT to Vegetables, the Food most easy of Digestion is Fish, amongst which the Whiting and

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and the Flounder are greatly esteem'd, and are often permitted the Patient in Fevers, when the Violence of the Disease is abated.

A L L Fish, the whiter they be, the easier they are of Digestion; and hence appears the Reason why Mackarel, Tench, Carp, and the Trout are much more difficultly digested, than the Whiting, the Place, and Flounder; and the Char-Fish and Salmon are still harder of Digestion, as they approach nearer to the Nature of Flesh-Meats.

F L E S H - M E A T S, of all others, are the hardest of Digestion; but, by reason of their Diversity, some are more so than others.

W H I T E Meats, generally, are easiest of Digestion; and this appears not more frequent in the several Kinds of Fish, than Flesh; for the Chicken and Rabbet, I think, of all others, are the tenderest, and consist of a Texture of Parts that are the most easily separable.

N E X T in Order are Mutton, Lamb, and Veal, Pig, and young Pork. The Turkey is not only an agreeable, but a nourishing Flesh; Goose-Flesh, Pigeons, and all Wild-Fowl, except Larks, and Birds of lesser Size, I would have refrain'd.

T H E Feet of most Quadrupedes, especially great Heifers, make the best Jellies, and are much better, and more nourishing in Diseases, than the Jellies made of Harts-Horn; besides, they may be so order'd, as to afford a very restoring Diet, proper for those that labour under Wastes, Decays, and Consumptions.

I N D E E D, the Diet of the ancient Patriarchs was very simple, Bread, Roots, and Oil being the greatest Part of their Food; and yet they reach'd a much longer Date of Years, than any we can boast of.

BUT

BUT, I must confess, our present Set of Vices, and modern Tastes, demand another kind of Viands: We live in an Age most refin'd for Vice and Luxury, where most People are averse to that Regimen that comports not with their Inclinations and Palates.

BUT the most proper Way to cure Diseases, is, in some Measure, by living counter to the very Method that brought 'em on.

IF, therefore, rich Sauces, and high-season'd Meats, over-strain'd the Solids, by raising their Contractions above their natural Standard, certainly, the only Way to regain their Force will be, by abstaining from the first Cause of their Disorder.

PLAIN Meats excellently well agree, and if as soon prepar'd for Food as kill'd, and so eaten, I believe, they would be most agreeable for restoring the Decays of Nature.

IT is a strange Conduct, I have observ'd, in most of the Gentry, in all Countries where I have been, to keep both Flesh and Fowl till they are tender, before they dress 'em, pretending, that by this Means the Meats eat lighter, and are of easier Digestion: But this is an egregious Mistake; for, in all new-kill'd Meats, there is a peculiar Balsam, or Gass, that gives that Firmness to the Fibres, we are apt to take for their Toughness or Hardness, and which preserves 'em from Putrefaction.

NOW as this Sweetness is in a continual Flux, so in three or four Days Time it begins to be near spent, and an opposite Smell betrays itself, which sends, to the Nose, no very agreeable Hogoo; and, from this Observation, it will evidently appear, that the more of this balsamic Sweetness there is in any Meats, that is, the sooner they are eaten for Food, after they are kill'd, the more nourishing they are to

our Bodies, having all their Salts pure and undissolv'd, which are in a continual Flux after their Life is destroy'd.

MILK, of all other Aliments, is the most remarkable for the Cure of Chronic Diseases, and no ways prepar'd does it appear so advantageous to the Constitution of those that take it medicinally, as immediately drank after it is drawn from the Teats; for new Milk has a peculiar healing Balsam, even as we said of Flesh, which it loseth every Moment of Time after it is drawn from the Animal. And, of this, all Physicians are so sensible, that they advise their Patients to drink it, if possible to be had so, warm from the Dugs.

AND this Balsam preserves the Mass from immediately settling one Way or other, and also keeps the Particles of Cream at equidistant Spaces, and equally diffus'd thro' the whole Fluid.

As to the Vertues of Milk, it is sovereignly good in most Chronic Diseases; it restores the languid Fibres, and disposes to be lax, those that are subject to Costiveness, as frequently happens to those that are inclinable to Melancholy, the Scurvy, or any Nervous Affection, as the Vapours or *Hypochondria*; and, if the Constitution of the Stomach be not much impair'd, I believe the Cow's Milk may do full as well, or, in some Cases, better than the Ass's Milk; but in all weakly Constitutions, in emaciated Bodies, the Ass's Milk is certainly preferable, as being more thin, light, and easier of Digestion, and, of Consequence, softer, and fitter for the Nourishment of the several Parts, as not containing so many oily, buttery Particles, to obstruct its Entrance into the Lacteals; for this I have observ'd, that if the Ass's Milk stands twelve Hours, it will gather no Cream, as most others will in a lesser Space of Time.

As Whey is the Offspring of Milk, so is it a Liquor both nourishing, cleansing, and very cooling to the Body, and therefore may greatly benefit such as are subject to Inflammations of the Bowels.

It relaxes the Intestines, and mightily helps those that are affected with an obstinate Costiveness.

But however, in the Conduct of Diet, and the rest of the Non-naturals, much is to be yielded to the Customs of Nature, and upon no Account must we suddenly change or thwart those Customs; for when Persons have, from their Infancy, been indulg'd in the Use of the richest Sauces, and highest season'd Meats, it would be a desperate Folly suddenly to abridge them of those Habits, and confine 'em to a spare Diet; for, in such Cases, Nature would sink under the Attempt, and the Patient dearly suffer from such rash Advisers.

But as Custom is often pleaded to support our own Inclinations, in Opposition to Nature, tho' of pernicious Consequence to our Health, and the Welfare of our Bodies; so I shall here beg leave to observe the Nature of this Custom, and the Ways most proper to remove it.

Custom then is an Adventitious Quality, related to several Actions of Life, gradually arising into a Habit, by successively multiplying the same Action. It very much resembles, but never acquires the Identity of Nature.

We ought, therefore, to be very careful, that things be brought about regularly, and Habits alter'd by Degrees, so as that they may safely be done at times, and by small Abatements.

S E C T . III. *Of the Fluids most agreeable in Diseases.*

of Fluids. **B**UT, besides this Appetite of Hunger, Nature has implanted in most Animals, the natural Desire of Fluids, which Appetite we call Thirst.

IN Man it is so absolutely necessary, that without it the former could suffer no Digestion, nor afford any Nourishment for the Support of the Constitution, nor pass those minute Foramina's for the Encrease and Growth of every the minutest Part.

AND as our Bodies are fram'd of the most simple Elements, one would naturally think, those Fluids should be best for the Support of the Constitution, that are the most simple, homogene, and freest from Mixtures; but the Misfortune is in this, as in solid Meats, we do not so much consult what our first Natures require, as what our present Set of Vices demand for their Satisfaction.

WATER, doubtless, as it is the most pure and uncompounded Element, so it demands our first Attention, and few are ignorant of the great Encomiums that have of late been advanc'd concerning the Vertues this Fluid is suppos'd to be endued with: some averring, it will cure all Fevers; others, that it will prevent all Diseases. I, for my Part, must confess, that it has been found of great Service in some Cases, and to some Constitutions: and I speak by Experience, having never us'd any other Menstruum for the Digestion of my Aliments, during the first thirty Years of my Life.

BUT

BUT then, highly dangerous is it for those, that have been us'd to the most generous Wines, suddenly to abandon those Noble Liquors, and to endeavour to habituate the Constitution to the drinking this pure Element ; such must thank themselves, if, instead of Advantage, they find the Consequences pernicious to the Constitution ; for as our great Master *Hippocrates* advises, the Changes of Habits, natural to the Constitution, should be made insensibly, and by little and little, which, well observ'd, may prevent those fatal Effects that too often happen thro' our rash Attempts.

And, indeed, I must confess, that one kind of Fluid will no more fit all Constitutions, than the same Manner of Diet will agree with every Appetite.

WATER is that universal Menstruum that pervades the minutest *Foramina's* of Nature, and yields Nourishment to all created Beings ; nor is there a Vegetable, Mineral, or Animal in the Creation, that is not supported by the Cohesions of this Fluid.

THAT is best for Use, which is the purest, the lightest, and the clearest, being perfectly tasteless and free from Terrestrial Mixtures.

THIS, of all other Fluids, us'd for Digestion, is least porous ; and its Spheres are so exceeding small, as not to discover their Bulks, by the most curious Glasses ; even those, that will magnify 100000 Times, give no Appearance to the Sphericity of its Particles ; so that those Constitutions, to whom Custom has render'd it familiar, must receive great Advantages in Point of Health, both as it will digest easier and sooner than any other Fluid, and as it will quicken the Appetite, and pervade the minutest Artery.

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A L L Writers universally, as well Antients as Moderns, highly extol it in Fevers, and several other Diseases that have Obstructions for their Parent; and they, that drink it constantly, are seldom or never subject to those Diseases.

I F we examine into the Qualities of Spring-Water, which is the Basis of all other Fluids, we shall find it nothing but the most minute Spheres of Matter, in which float a good Quantity of Nitre; and the Difference between the *Bath* and *Bristol* Waters I look upon to be only as the former proceeds from a Mineral Sulphur, and the latter from a Vitriolic Salt, which gives to the latter that Stipticity, that renders it so serviceable in the Cure of the *Diabetes*.

V I T R I O L and Sulphur I only say, as I believe those Salts to have the Ascendant; not, but that both the one and the other may contain other Principles, which they may confess upon a Chymical Analysis.

B U T farther yet to illustrate the great Advantages that may accrue from Spring-Water, being made the Basis of Digestion, I beg leave here to relate the following Experiment.

I N the Receiver of the Air-Pump were placed several Glasses, containing the following different Liquors: One had Spring-Water; another small Beer; a third Ale; a fourth Claret; and the last Mountain Wine. As soon as the Air was some Degrees withdrawn, by the working of the Air-Pump, the Beer began to boil. Upon the removing a little more, the Ale followed the same explosive Motion; the Red Wine next, and the Mountain last: but, as for the Water, it continued all the time free from any intestine Motion, which in a great measure demonstrated, that it contain'd of Air, included in its Interstices, the least Quantity.

FOR

FOR nothing caus'd the Boiling in the other Fluids, but the Force of the Air included in their Vacuola's, endeavouring to disengage itself upon the Pressure of the Atmosphere, taken off from the Surface of those Liquors.

FROM the foregoing Experiment I draw this Natural Conclusion ; that Water must consist of the least Spheres, as it contains a less Quantity of Air than any of the former Liquors, which will enable it better to pass the minutest Fibre with the lesser Resistance ; and, of Consequence, remove those Obstructions the Body is often subject to, from an over-viscid State of the Fluids.

NEXT to Water, the Fluids most generally in Use, for the Digestion of our Aliment, are Beer and Ale ; and if, of a moderate Strength, and not over liberally us'd, may agree well enough with those Constitutions, that all along have been accustom'd to them ; but, if taken to Excess, they prove not so wholesom a Nourishment to many Constitutions, but bloat 'em up with an infirm Fatness, and croud the Body with Obstructions, causing Windiness, Gripings, and Cholic Pains, which most, that have been liberal Drinkers, shall feel the Effects of, as they advance in Years.

NOW, if we leave these, and ascend to consider the Nature and Qualities of those Fluids, that are enrich'd with a more noble and generous Spirit ; such are all, or most Wines ; we shall find 'em more friendly to the Constitutions of most People than the former ; and tho' I am inviolably attach'd to Spring-Water, and prefer it to all other Liquors for my own Drinking ; yet cannot but confess the great Benefits that accrue from a Glass of generous and well-bodied Wine, either

after great Studies, or when the Spirits, thro' much Fatigue, are under any imminent Pressure.

WINE, especially the Red, containing a Warmth more friendly to the Stomach, is of great Service in many Chronic Diseases; and in slight Decays a sovereign Remedy, if medicinally taken; for abounding with a Tartarous Subastrin-gency, as a *Stimulus*, it strikes the Fibres of the Stomach, whereby they purse up their too relax'd Tone to a due Tensity; aptly fitted to perform the Office of a good Digestion.

I BELIEVE it will be granted me, that we should find the Effects of Wine greatly exceeding in their Efficacy what they are, if we would condescend to be a little more moderate in their Use. For every time we over-charge the Solids, we lay a stress upon the Constitution, which, if the Dose be often repeated, must at last sink it beneath its just Balance, from whence all those Chronic Diseases arise, that frequently attack most of your great Wine-Drinkers, toward the latter Stages of Life.

AND here I cannot pass over the ingenious Remarks, that the judicious *Leffius* makes in his *Hygiasticon* upon Wine; *That Wine, tho' hot in its own Nature, yet, if immoderately drunk, generates cold Diseases*; which can happen upon no other Account, than as its immoderate Use destroys the Tone of the Solids, and by that Means impairs their Action.

INDEED Wine and other warm Cordials best agree with People in Years, according to that Adage, *Vinum est Lac Senum*; and never should they be permitted, in any great Quantities, to younger People, but especially Children.

THEY act therefore very unreasonably, that pamper young Children by feeding 'em with poignant

poignant Sauces, and rich Wines, whereby they unravel their Vessels, and are made Men and Women before their Times ; and all the Satisfaction the fond Parent enjoys is, to see the little Creature dance the Imagination in brisk Repartees and false Wit above those of its Age.

THESE little Pigmies generally, like Mushrooms, start out in the Night, and are gone the next Morning.

THEY seldom arrive to a mature, never to an Old Age ; for these Bodies of ours are in a continual Flux and Reflux, and we gain the Achme of Strength, and arrive to Manhood sooner or later, as we more or less indulge in a luxurious Manner of Diet ; and of Consequence decline accordingly.

BUT, of all Liquors in Use, Drams are the most liable to Exception, under which Title I comprehend Brandy, Usquebaugh, Citron-Water, &c. and all others of inferior Rank, that abound with Plenty of hot fiery Spirits, such as Geneva, &c. Of these, or any of them, I can entertain no Notion, but what is destructive to the Constitution ; and the little Good they ever have been known to do, has been greatly counter-balanc'd by the infinite deal of real Mischief, that has been owing to their over-liberal Use.

THEY have such Charms, and are of that bewitching Nature, that the Benefit we often strongly fancy we receive, is but imaginary, and they fail not, by their immediate, agreeable Sensations, to draw us on to their Use, 'till we manifestly perceive their pernicious Effects ; and then too late lament our over-credulous Fate, when we have brought our Constitutions to such a Habit, that we can sooner want a Meal's Meat, than a Dram to digest it ; nay, to such a Pass I have

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known some arriv'd at, that they could not endure the Sight of Victuals without a Dram ; and others (I now speak things known, and of which I myself have been an Eye-Witness) that could not write a Line, without a Quartern of Hot Spirits ; tho' these Shakings of the Head, and Tremblings of the Hands, were confess'd to arise from the Drinking of Drams.

Nor can I believe that there is ever any real Occasion for those imaginary Helps in any Disease, but what might much more safely be reliev'd without them ; and to say otherwise would be a Reproach to this Noble Art ; their very Original being but of late Standing, and their great Influence in the Nervose Cholic, and Histeric Disease, are notorious Cheats ; those Diseases for the most part owing their Existence to their over-liberal Use ; and it is a wild and preposterous Method to make the Cause cure the Disease.

I have been more free in my Censure of those Liquors, because of their baneful Influence, they having destroy'd their Thousands, I may add Millions ; and, if we consider the Benefits even pretended, we shall find 'em very inconsiderable, in respect of the Numbers that have receiv'd Damage, thro' their over-indulgent Use.

P U N C H is the last Liquor I shall take notice of. The Ingredients are Brandy, Rack, or Rum, Water warm or cold, Lemon-juice, Sugar, and sometimes a little Milk is added, which denotes it Milk-Punch. And, indeed, this is a Liquor not only very pleasant, but little differing in its Effects from Wine ; and, if moderately us'd, may be of great Service in whetting a pallid Appetite, and raising all the Natural Digestions : But its liberal Use either brings on a Diabetes, or involuntary Issue of the Urine, which are generally

rally the Misfortunes attending great Punch-Drinkers.

I M U S T beg leave here to add a little Differentiation upon the Virtues of Theas, since the one or other of 'em are in much Esteem all over *England*.

IN DEED, they have been greatly decry'd of *the Virtues of Theas.* late, and lost much of that Reputation they ob-

tain'd twenty Years ago.

EVERY BODY must be sensible, that they were unknown to our Forefathers, and are but of Yesterday's standing, in Comparison of those Fluids, we have already taken Notice of.

THE Bohea and Green, I believe, differ only from the different Times of gathering, the Green being the Bohea cropp'd early, before it flowers, the Bohea after the Flower is blown; and what induc'd me to this Opinion was, that I never could perceive any Flower in the Green.

TEA has all the Qualities of a Cordial; for it will stay the Operation of a Purge, and hinder its griping; and we may remember, that a few Years ago the Bohea was esteem'd of as the greatest Restorative in Consumptions, and a celebrated Remedy in all Cases where there were any Symptoms of Wastes or Decays, and that by Persons of no mean Rank and Authority in the Faculty of Physick.

AND those good Effects were observ'd visibly to arise from a liberal Use of the Bohea, which, at present, lies under great Discouragements.

BUT, if it be the same now it always has been, I can never impute those Disorders it is charg'd with from any bad Qualities of the Tea itself, but rather from some Irregularities either in the preparing or drinking of it.

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We all of us are sensible, that nothing is so good, but it may be abused, so cordial, so rich, but an over-liberal Use shall prove destructive; nay, the richer the Cordial, the more dangerous the Effects.

Now as Tea is a Cordial, and that indued with the most pleasing Taste, causing agreeable Sensations, and not attended with those manifest Disorders that accompany most other Cordials, a-bounding with Plenty of inflammable Spirits; so does it often prevail with unwary Persons to sip more of it, perhaps, than is consistent with preserving the Constitution under a due and regular Balance.

AND I have heard of some Ladies, that sit to the Tea-Table, as Gentlemen do to their Bottle, when they vie with each other, who shall fall in the Conflict.

INDEED, from such Abuses, I do not wonder to hear of Consequences so destructive; but if People had confin'd themselves to two or three Dishes, with a little Milk, or Slice of Bread and Butter, I believe the Complaints had not been so general, as now they are, and those only owing to its over-liberal Use; and if we add its frequent Adulterations, and the vast Quantities of damaged Tea, that the Retainers of this Commodity get died; I believe there is not a Symptom it is charg'd with producing, but what may arise from one or other of those Originals.

I AM now acquainted with a Gentlewoman highly Asthmatic, that is always reliev'd from the severest Fits, by drinking three or four Dishes of Green Tea; and others I have met with, that have found great Relief in the Rheumatism by moderately drinking it.

BUT

BUT this Caution I must beg Leave to observe, that they that find it agreeable to the Constitution, may continue to drink it, while those that perceive it to flatten the Spirits, and infer Vapours, ought to refrain its Use. The grand Intention of all Diet, whether Solids or Liquids, being to support Health and a good Constitution, not to impair those invaluable Blessings.

S E C T. IV. *Of Exercise and Rest.*

THOSE that are willing to acquaint them-*Exercise.* selves with the great Benefits accruing to the Body, from a right-regulated Exercise, ought to consider the Difference between the Right and the Left Side, in Relation to Strength:

ALL our Bodies consist of Fibres, in which are lodg'd a Contractile and Distractile Power, that is greatly intended or remitted, according as Exercise is more or less apply'd, and as that Application is more or less justly proportion'd to the Constitution of the Body.

THIS will appear evidently clear, if we consider, that the Right Hand, the Right Leg, and, generally, all the Parts of the Right Side, are more robust, and able to make greater Resistance to external Injuries, than the same Members of the Left Side; and these signal Advantages they enjoy from the Use and Custom of Exercise.

So that all Diseases, depending upon the Habit, always fall more heavy upon the Left Side, from its Weakness thro' Want of Exercise.

THE first Fits of the Gout generally attack the great Toe of the Left Foot; and if the Stone or Gravel invade the Kidneys, most commonly the Left is the first affected; and the Dropsy never, as I know of, invades any Person, but that

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the Left Ankle is much more swell'd, and pites more than the Right.

AND I am not able to account for this Difference otherwise, than as the muscular Fibres of the Right Side, being more tense and firm, thro' more frequent Exercise, make greater Resistance to the settling of the Juices; that is, to speak of the Habits of Parts, the Contractile Powers of the Solids in the Right Leg being stronger, oblige the Fluids to maintain their Circulation with greater Vigour; while the muscular Fibres of the Left, thro' Want of Exercise, being more loose, and consequently their Contractions more languid, cannot overcome the Resistance of the Fluids, but they are suffer'd to make a Lodgment about the Ankle, which, towards the Evening, yields to the Pressure of the Finger.

As Exercise and Motion contribute most to the restoring of the Body, labouring under Chronic Diseases; so Rest, its opposite Quality, seems peculiarly adapted for answering our Purpose in those that are of an Acute Nature.

IN all Fevers it is best to keep the Patient as compos'd as possible, and a horizontal Position is properest; for as a plentiful Breathing is the only safe Way to compleat a successful Cure, so no Posture so much encourages that, as a Bed Posture.

I HAVE seen a Patient labouring under a dangerous Fever in a fine breathing Sweat, and all the Symptoms promising; which Sweats, upon the Patient's being taken up, have retreated, and all the Symptoms return'd with greater Rage and Violence. I do not say, that upon his being laid in Bed again, the good Symptoms return'd; quite the contrary, for the Patient miscarried; but who may they thank for those malignant Aspects?

BESIDES,

BESIDES, a Bed-Posture is the most easy to any Person under Pain, as most commonly attends Acute Diseases; not that I mean by this, so to confine the Patient to his Bed, as, upon no Account, to suffer him to arise, during the Continuance of the Disease; but only that he be not disturb'd during those fine breathing Sweats, that are of the greatest Advantage towards restoring his Health, and which, if once check'd, are not so easily brought on again.

As Sleep and Watching have relation to those going before, so they are annex'd to 'em in Order, and come now to be treated of; but, as we have already observ'd, the Bed is best suited to the Nature of Acute Diseases, and large Sleeps contribute most to the abating the Rage of their Symptoms; so, on the contrary, early rising is the most proper Remedy for those Chronic Disorders, whose Cure depends upon Motion, and therefore will they demand lesser Sleeps, and more Watching.

And here I must beg Leave to subjoin a Dissertation concerning the Advantages of Bathing; for our great Busines, in the Cure of Diseases, is to get acquainted with a Set of Remedies, that, in their Operation, may lay the least Stress upon the Solids.

AND as in the Cure of most Acute Diseases, of Bathing, especially those attended with intense Pain, a plentiful Breathing is the quickest, and most sure Way of procuring a Solution of the Melady; so, no Way can I perceive that great Help so likely to succeed as by Warm Bathing; for the Hot Bath being a Composition of Warmth and Motion, or, at least, communicating those Sensations to our Bodies, by the former Quality, it greatly softens and relaxes the Solids, and by the latter, fuses and

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thins the Juices, and by that means renders 'em more divided, and fitter to go off by Perspiration, which, in all Constitutions, it never ceases plentifully to raise, and that without laying the least Distress upon the Solids.

THOSE Breathings rais'd in the Hot-House, are both more profuse, and extremely different from those rais'd by internal Medicines; for the former are insensibly procur'd, which gradually arises, first outwardly, by unbracing the cutaneous Emanations, dissolving the Viscidness of the Juices, and, letting in that genial Warmth, that communicates such agreeable Sensations to every Fibre of the Body.

ON the contrary, those Medicines that are taken inwardly, can have no Effect, unless they encrease the Heart's Motion, by which a greater Stress is laid upon every Solid, and the Motion encreas'd in every Fibre of the Body.

Advantages of Cold Bathing. BUT as the Hot Baths, if for any considerable Time continu'd, are apt to produce a too great Relaxation of the Vessels, so those Disorders are best remedy'd by having Recourse to the Cold Bath, which, being a Composition of Cold and Motion, resulting from an intense Cold, equally apply'd to every Part of the Body, acts upon the Constitution, by bracing the Solids, whereby it restores their Fibres tight and firm, and preserves their Motions within their proper Balance.

THIS Action of Cold Bathing is of mighty Service in all great Weaknesses of the Limbs, and Feebleness of the Constitution, and not a little prevails in the Cure of that Disorder we call the Vapours, if us'd in the Beginning; besides, it has great Influence in all manner of Gleets not Venereal, and, in such Cases, is the best modern Remedy we have; and as Warm Bathing removes Obstructions,

Obstructions, and evacuates those stagnant Juices, that cause many Diseases, so, once they are remov'd, the Cold Bath will be the only proper Remedy to prevent their Return.

SECT. V. *A Regulation of the Passions.*

THE Passions of the Mind are the last of the Non-naturals, whose Disorders I am here to regulate ; and as their irregular Excursions greatly exasperate the Symptoms of both Acute and Chronic Diseases, when they are either exalted or depreſ'd above or beneath the Balance of Nature ; so, when rightly dispos'd, and reduc'd within their just Bounds, they fail not to produce considerable Alterations in the Animal Oeconomy, in order to a successful Cure.

REASON is the grand Conductor of the Passions, which are only the Affections that conjoin Matter and Thought, and are more or less intended or remitted, as the Mind or Body is more or less elevated or depreſ'd.

WHILE they continue to be directed by this sovereign Power, they are of admirable Service in furthering the several Actions of the Body, and preserving the Balance of the Animal Oeconomy.

BUT, indeed, the best Way to preserve 'em under a right Regulation, is to live regular, and keep the Constitution even ; for the Non-naturals all depending upon one another, a Breach in any Particular will pervert the Harmony of all the rest.

IF we examine into the Reason, why, of two Persons consider'd in all Circumstances alike, the one is fat, and well-hiking, the other thin, and of a meagre Habit of Body ; it is only the Passions that make this Difference.

ALL Mankind, sound of Constitution, would be well-liking, as well as other Animals, with good Feeding, were it not for the Passions; but then, a Man without Passions, would differ little from the Brutal Part of the animated Creation, unless in Shape, which could only entitle him to the Condition of a Changling, in which State the Blood moves with a heavy Pace, and is the principal Cause, why all the Functions of Life are clumsily perform'd; and, under such Circumstances, you see nothing but a moving Piece of Clock-Work, almost void of Life, Sense, and perceptible Motion.

THE Passions therefore ought to be chearfully supported, under the Cure of all Diseases, and the Mind as much as possible compos'd to Mirth and innocent Recreations; for Chearfulness of Spirit is the grand Symptom of a healthful Body.

IF, in Company, I behold a Man always chearful, I can, without an Oracle, conclude him healthful; for these elevating Passions of Joy, Mirth, &c. raise the Motion of all the Juices, and cause agreeable Sensations in every Fibre, in which consists the Essence of a healthful Temperature.

WHILE on the contrary, Fear, Sadness, and the other dejecting Passions, depress the Motion of the Animal Fluids, hinder Nutrition, and make a ghastly Look all over the Constitution.

I SHALL beg Leave to conclude this Chapter of the Non-naturals with that excellent Advice of Tully Cicero *.

TANTU M Cibi & Potionis adhibendum; utendum Exercitationibus modicis; in omnibus habenda Ratio Valetudinis. Nec vero Corpori solum subveniendum est, sed etiam Menti atque Animo multò magis, ut reficiantur Vires, non opprimantur.

* De Senectute.

CHAP. III.
Of Medicines agreeable in Diseases, according to the System of the foregoing Theory.

SECT. I. Of Emeticks.

THE Diseases that affect our Constitutions, are not more general, than the Remedies that the Providence of Nature has afforded for their Cure; and if we consult the several Classes or Arrangements of Creatures, we shall scarce find one that does not contribute something to our Relief; scarce a Vegetable, Animal, or Mineral, that affords not some healing Balsam, some strengthening Cordial, to restore a weakly, crazy Constitution; even the Viper, the most destructive Animal, may be apply'd as a Counter-Poison.

Now, as we have endeavour'd to demonstrate that all Diseases must arise from the Contraction of the Solids, elevated or depress'd above or beneath the Balance of Nature, and from the several Degrees of Viscidity or Siziness of the Fluids consequent thereupon; so will it follow, that this different Motion of the Fluids must affect the sensible Evacuations, and intend or remit the Quantity to be excreted.

It is, therefore, my firm Opinion, that every Medicine we give in the Cure of Diseases, must either make an Alteration in some of the Evacuations, or else it can be of no Service to the Constitution, in relieving those Maladies.

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AND the best Way to fling off Diseases, in such Cases, is to intend those Evacuations in the Cure, whose Partiality gave 'em an Existence in the Body; and this we find clearly to answer in Fevers, which, as they arise from an obstructed Perspiration, so are they as generally cur'd by a plentiful Breathing.

BUT as my Intention is, to acquaint the Reader with a Set of Medicines, that may serve, in all Cases, universally to restore languishing Nature, so shall I consider the Nature of those Medicines first, that operate by Vomit.

AMONG all those Medicines that demand our Consideration, Vomits are the most considerable.

THEY act upon the Stomach, by vellicating its Membranes, especially its inner nervose Coat, which they principally affect, and draw into Spasms, whereby its Contents are cast up by the Mouth. But tho' their chief Scene of Action be in the Stomach, yet they often continue to affect the circulating Fluids, as appears from the Beating of the Pulse, being that it is considerably increas'd during the Operation of a Vomit.

THEIR Effects are very considerable in the Cure of most Chronic Diseases, being that their Intention is to evacuate those superfluous Juices, that, by their Quantity, embarrass the Constitution, and by their Viscidity obstruct the Secretions of the Animal Oeconomy.

Dr. Cockburn's egregious Mistake concerning the Operation of Vomits. THEY act upon the Body according to the Strength of the Solids, not the Quantity of the Fluids, as Dr. Cockburn has falsely calculated; for I deny, that a Vomit ever exerts its Emetic Force after it has pass'd the Stomach; and whenever it gets into the Intestines it runs down in loose Stools, and this is the Reason why most People have a Stool or two after the Operation is over,

and why the stronger Purgers operate more by Vomit than Stool. And if a Vomit pass the Lacteals, and go into the Blood before it operates, it excites neither Vomiting nor Purging, but goes off by an encreas'd Discharge of Perspiration.

THE particular Vomits, in greatest Use by most Physicians are the *Sal Vitriol. Oxymel Scillitic. Ipocacuan. Tart. Emetic. Vin. Benedict. Turpeth. Mineral.* The first three are both mild in their Operation, and may be ventur'd upon, in the weakest Constitutions, where Vomits are necessary; the latter, if I mistake not, seem calculated for those of a stronger Constitution, and cannot safely be given but to the Robust.

INDEED, as to the Election of Vomits, I would only recommend to Practice the most mild and gentle, and, if the Nature of the Disease require more powerful Evacuations, the *Tartar. Emetic. and Vin. Benedictum* will answer the strongest Indications. And the Use of all mineral Vomits, especially in Substance, I would have abandon'd; for, by the Violence of their Operation, they, instead of restoring, impair the Digestions, and, very often, only serve to make the Breach wider, and render Diseases more incurable.

S E C T. II. Of Catharticks.

NOW as the Medicines, in the former Section, operate, by stimulating the Ventricle, to the Excretion of its Contents, by the upper Orifice; so are there another Set of Medicines, whose Operations are diametrically opposite to these in their Effects; for as the former are cast up by the Mouth, so these, on the contrary, go off by

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Stool, and they act by stimulating the Intestines to discharge their Contents both more quick, and more fluid, than the Laws of Nature require they should be, under a healthful Temperature of Body.

So that Purging may most properly be said to be, a Flux of Juices running off by Means of a stimulating Cause. This stimulating Cause is a purging Medicine, apply'd to the Intestines for that Purpose, which operates by encreasing the Peristaltic Motion of the Guts above its natural Balance, whereby the Excrements descend thinner, more divided, and in greater Quantities than the Body naturally discharges. But tho' their first Scene of Action is in the Intestines, yet their Effects cease not there, but, very often, they stimulate the Vessels every where contiguous to the Bowels, and oblige them to squeeze out their Juices, which afford a great Quantity of that additional Matter we often perceive to run off the Guts by a brisk Purge; and as they are generally less violent, so are they safer in their Operation than Vomits.

SOME of the Particles of a Purge, most certainly, enter the Blood-Vessels by the Læteals; for on the Day a Purge is taken, you may evidently perceive the Beating of the Pulse increas'd.

THE Effects of purging Medicines are most considerable in all Chronic Diseases, where there is a Glut of Juice to discharge; and the only Points to be consider'd in prescribing purging Medicines, are, to proportion the Dose to the Quantity of Matter we would discharge, and the natural Habit of the Constitution.

IN all cold, phlegmatic Constitutions, where the solids want informing, the best purging Medicines

dicines are those that abound with sharp, acrid Particles, rather hot than cold: Such are the Aloeticks, Scammony, and the several Compositions they come into, which are too well known to real Practitioners, to need any repeating here.

THESE help to convey off, by the common Shore, a Load of Juices that oppress the Constitution, and over-power the Balance in the Animal Oeconomy; for the Juices ought to be reduced to that just Fluidity and Quantity, that the Solids may be able to bang about and preserve 'em in exact Motion. But, in hot, bilious Constitutions, whose Fluids rather want a Curb than a *Stimulus*, we must make Use of Medicines of more temperate Qualities; such are the purging Salts, Manna, Cassia, Lenitive Electuary, Crem. Tart. which are the only proper Purgatives to be us'd in such Cases; to which if you add Senna, Rhubarb, and the purging Waters, as *Epsom*, *Stretham*, &c. I know not whether any Case can happen, but some of 'em may be requisite, where Purging is necessary.

THESE two Classes of Medicines are the Basis and Hinge, upon which, in general, the Cure of most Chronic Diseases depend. The latter Class more helps in Acute Diseases, and in the Fits of Chronic: They, or any of 'em, but especially the Purging Waters, give a mighty Coolingness to the whole Body, by softening the over-great Tension of the Solids, whereby they abate of their Motions.

SECT. III. Of Diuretics and Diaphoretics.

FROM treating of those Medicines that intend the first Passages, proceed we, in the next Place, to consider the Nature of those that

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exert their Operation upon the Blood and other Juices, and discharge their Excrements by the Cutaneous Glands.

THESE Medicines are call'd *Diaphoretics*, and the Discharge they make, a *Diaphoresis*, or Breathing.

THIS is the largest Discharge made from the Body, and, when intended, equals, if not exceeds all the other Evacuations.

IT gives the greatest Relief in all Manner of Fevers, and other Acute Diseases, and, when kindly rais'd, is a certain *Prognosis* of a successful Cure.

BUT they are of dangerous Consequence, if Breathing do not ensue upon their Administration; for being hot Medicines, they augment the Contractions of the Solids, which, of Consequence, too much fuses and divides the Blood, whereupon all the Symptoms of Fever, Heat, and Pain, are highly encreas'd, and the Patient brought into the utmost Danger, if, in the mean Time, some other Evacuation do not make Way for the Discharge.

THIS is a plain Indication that the Solids are over-tense; and the only Remedy to relieve them under this Distress is a plentiful Bleeding, especially if after that Operation you prescribe a pretty large Dose of some oily Medicine, that may help to abate the too great Stricture of the Solids, by relaxing their Pores, and restoring a plentiful *Diaphoresis*, which generally appears upon the Skin every where, not unlike a moist Dew.

SUCH are the *Theriac. Ven. & Lond. Rad. Serpentar. Virg. Rad. & Lapid. contrayer. Sales omnes volatiles*; all which greatly fuse, divide, and attenuate the Blood.

BUT so it often happens, that the lesser Dia-phoretics, when prescrib'd, in some Bodies, not liable to sweat, instead of discharging by the cutaneous Glands, run off the Juices by the urinary Passages, and then they change their Name for that of *Diuretics*.

DIURETICS are those Medicines, that, by their inciding and attenuating Qualities, thin the Blood, and quicken its Circulation, whereby the Secretion of the Fluids is encreas'd in the Kidneys; and tho' most of the Medicines that serve this Intention are purely accidental, and depend upon the Habit and Constitution of the Body, yet some of them are certainly determin'd in their Operation this Way; such are the *Lapis Prunelle*, *Sal Nitri*, and all the Mineral Waters; yet most of the stronger Diuretics, if over-dos'd, will excite a *Diaphoresis*: So that, to speak the most favourable, these Medicines are very precarious and uncertain in their Operation; for, in Constitutions where the Solids, that compose the cutaneous Glands, are generally springy, and open not with a little Force, there the Diaphoretics turn to the Kidneys; which same Medicines, in others whose cutaneous Glands are more lax, will raise a plentiful Breathing; so that, in respect of these two different Evacuations, nothing certain can be laid down, whereby an unerring Judgment may be form'd.

SECT. IV. Of Astringents.

WE have now taken a View of all the several Evacuations, that are the Inlets and Outlets to all the Diseases that can any way affect our Bodies, and the propereft and most ready Way to intend these Evacuations, in the Dis-

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charge of a Disease. But it not seldom happens, that Diseases arise, in the Body, from those Evacuations being larger in their Discharges than the Constitution can well bear; we must therefore endeavour to furnish ourselves with a Set of Medicines, that may ward off the Disorders that are apt to arise from an over-great Discharge.

UNDER this Class, I shall comprehend all those that are properly Astringents, as also those that come under that Name by their accidental Properties; such are all Anodines, Opiates, and Narcotics, for they evidently stay Fluxes; to which we may add all Alteratives, or those Medicines which are invisible in their Operations, since it has not yet been made appear, by what Virtue they act upon the Constitution, or what Alteration they make in the Animal Oeconomy, which, I am sure, if they had any visible Properties, we should, one way or other, perceive their Effects.

A S T R I N G E N T S act upon the Solids by bracing their Contractile Powers, and restoring their over-lax Tone, by which means they are render'd capable of retaining the Fluids.

BUT sometimes, when these Medicines are unskilfully us'd, instead of abating Fluxes, they increase the Discharge, by over-acting their Part, or drawing up the Fibres of the Stomach and Intestines to an over-great Tensity, whereby they make over-smart Vibrations upon the contain'd Excrements, and turn 'em off by Stool, both in too great Quantities and too much divided, and therefore should be very cautiously us'd, in all Diseases, where we would put a Stop to any Flux subsisting in the Body.

OF this Kind of Medicines are all Minerals abounding with an acid Subastringency, which may

may stimulate the Bowels to corrugate their Fibres, and shorten their Contractions, the chief of which are the Spirit and Oil of Vitriol, and Sulphur, the *Rad. Bistort. Tormentil. Cin. Suc. Acac. &c.* as also the Laudanums of all Kinds, the *Sem. Hyoscyami, &c.* the testaceous Powders, as the *Coral. ppt. Margarit. ppt. &c.*

S E C T. V. Of the Operation of Cordials.

NEXT to these, and the Medicines that have a more peculiar Influence upon the Evacuations, are *Cordials.*

RIGHTLY to class these Medicines, and determine wherein their Cordial Nature consists, and what it is that sends those agreeable Sensations to the Brain, that so pleasingly affect the Passions, are Difficulties I must confess my self unable to resolve.

BUT this I may venture to lay down as a most certain Standard, and what I shall keep to in unravelling the Virtues of Cordial Medicines, that whatever will raise the Contractile Powers of the Solids, and induce a Pleasingness upon all the Passions, will come under the Denomination of a Cordial, according to the modern Acceptation of the Word.

BUT it has been our Misfortune, hitherto, to judge of Cordial Medicines by their immediate Effects, and not by the Consequences of those Effects. So that whatever will raise the Spirits, and give a pleasing Sensation to all the Passions, is esteem'd of as a Cordial, not considering the Degrees to which those spiritous Cordials very often over-aft their Parts. Of this I am certain, that whatsoever raises the Nerves and Spirits above the Balance of Nature, or above the *Equilibrium* of Health,

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Health, must prove of pernicious Consequence to the Nervous System; for the Consequence will be, that, when the Effects of those fiery Spirits are over, (and of which we have treated in the former Chapter, §. 3. under the Title of *Drams*) the Nerves and Spirits will sink as much beneath their natural Balance, as those spurious, pretended Helps did raise them above; and, by this Means, they will demand continual Aids, from those false, deluding Liquors, to keep up their Vigour, which, in Time, must destroy their Motions, and shock the Constitution.

THAT, therefore, is the best Cordial, that preserves the Nerves and Spirits within the Sphere of their just Balance; and this I look upon to be the most generous Wine moderately taken; and whatsoever is stronger than that, is either wholly useless, or only to be us'd in great and pressing Emergencies.

WE observe, that Persons us'd to the most insipid Fluids, as the Poor of all Countries generally are, preserve a much more healthful Constitution, and that to a longer Duration of Time, than those that employ the strongest Cordials; and the oftener they are us'd, the more effete and languid they render us, in all the Actions that depend upon the Vigour of our Bodies.

THERE is a great Difference between those Remedies that restore languishing Nature to her just Poise, in which Condition she ever acts with Pleasure, and those that over-act their Parts in the Constitution, as appears from the widely different Effects of these that are real Cordials, and those that are Counterfeits, and only esteem'd so, from the momentary pleasing Succours they give to the Spirits.

AMONGST

AMONGST the former are all Wines, and the aromatick Spices, and in particular Tea, of whose Virtues I have largely treated in Chap. 2. §. 3.

AMONGST the latter I comprehend all the inflammable Spirits, as Brandy, Rum, Citron-Water, &c. and the Geneva's of all kinds.

THEY act upon the Constitution by bracing the Solids, and encreasing Perspiration, whereby they lessen Breathing Sweats, when they are excessive; and they have the same Operation upon the Cutaneous Emunctories, that Astringents have, or ought to have upon the Bowels and first Passages, save that their Operation is more sure; for whereas Astringents often fail of Success, they never, if they be but rightly dos'd; the Particulars of which I shall not enumerate, since most People are too well acquainted with this Catalogue of Medicines to want any farther Information about 'em.

SECT. VI. *Of Topical Applications.*

THE last Set of Remedies, I shall take Notice of, are those vulgarly call'd *Topicks*. Under which Word I shall comprehend all those Applications, that are externally made to particular Parts, without encreasing or diminishing any of the natural Evacuations, unles by Accident.

TOPICAL Remedies are then to be apply'd, when all others fail, and the Evacuations cannot be intended or remitted so, as the Disease may safely go off without 'em.

THEY are generally external Applications, intended for the Ease and Relief of some particular Part, and serve either for the Derivation or Revulsion of a Load of Juices charg'd upon any Part, greater than it can dispense with. Under this

this Class of Remedies I shall range the Application of Cupping-Glasses, Blisters, Seton's, and other Plasters and Liniments, the several Kinds of Caustics, as also those Operations that depend upon the Lancet, as Phlebotomy, Arteriotomy, &c. all of whose different and particular Ways of Operation, clearly to illustrate, would take up more Time and Room than I have here to spare.



C H A P. IV.

Of the Administration of Remedies.

BUT it is not enough that we understand how to choose good Medicines, and the Nature of their Operation, but we must also know how to apply 'em, with Benefit, to Mankind.

A C U T L E R may know how to choose a good Blade, may also understand the right Temper of the Metal, and several other Circumstances, concerning the Form and Manner of its Fashion; but it's the dextrous Fencer only, that understands how to use it; so, I question not, but some ingenious Apothecaries may distinguish the Nature of Drugs, as well as some Physicians, but the successful Application is only to be expected from the latter.

T H E Y, therefore, that desire to administer Medicines for the Benefit of Mankind, ought to be thoroughly acquainted with their Nature, their Virtues, the just Dose, the proper Times of taking them, and the Agreeableness of their Qualities with the Constitution of the Patient, and the Disease he labours under.

I T

IT is a common, receiv'd Opinion, that every Country affords Medicines suitable to the Cure of those Diseases that are incident to those Climes; and I know not, but that they may very well agree with the Constitutions of those Countries, that have no Converse with foreign Parts.

BUT we are to consider, in a People, where the greatest Part of their Diet is foreign, there, in the Cure of those Diseases, caus'd by foreign Diet, there will be a Necessity for the Use of foreign Drugs:

NOW, as we have endeavour'd to prove, in the former Parts, that all Diseases take their Origin, either from an over-great Tension or Relaxation of the Solids, the System of the Veins, Nerves, and Arteries, in all Diseases going into one of these States; so will it follow, that all the Medicines that are prescrib'd for their Relief must be apply'd to the Solids; and as they affect, or disaffect them, so they fuse or thicken the Blood, so they cause or cure Diseases.

AS the Blood is always over-much fus'd in Acute Diseases, so is it as constantly over-viscid in those of a Chronical Nature; and in these two different States of the Blood, we must have a particular Regard to the Parts affected, and the several Degrees of Pain, that severally affect them, under both Acute and Chronic Diseases, and always remember, that the Administrations must vary, as different Symptoms arise, and disturb the Parts; and that, let a Specifick be never so certain in the Cure of a Disease, yet, if it be not discreetly manag'd, it may prove pernicious; and this I beg Leave to instance in the most certain and safe Specific yet known among Mortals, I mean, the Jesuit's Bark, a real Blessing, when us'd with Judgment, but attended with all the contrary Effects, if indiscriminately given.

THAT

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THAT when it is disorderly given, without any Regard to the present Symptoms, before proper Evacuations; not manag'd, in the Administration, with that due Care necessary, in such Cases; not well-tim'd, as to the Fits; not prescrib'd in just Quantities, as to the Dose; and, very often, what is of great Consequence, not join'd with proper assisting Remedies; for Want of all, or any of which Management, it many times proves destructive to the Patient, raising more dangerous Disorders in the Animal Oeconomy, than those it was intended to remove.

AND, I believe, there are few living, that cannot give some Instances of the dangerous Consequences attending the precipitate Administration of Mercurial Preparations, from unskilful Hands; Remedies second to none, if rightly administred, especially in the Cure of Chronic Diseases, or where there is Occasion for raising the Contractile Powers of the Solids, and fusing the Blood.

INDEED, I have added this Chapter, principally for the Information of those Persons, whose Prejudice may excite 'em to believe, there is no Certainty in the Principles of Physick, and that all Practice is mere Guess-work and Empiricism: But, certainly, they are much mistaken, in entertaining such wild, vague, and inconsistent Notions; for I aver, that none of the Sciences have more certain Principles to go on, than Physick; for the Justness of Practice arises from our being able exactly to proportion the Dose of the Medicine to the several Degrees of the Disease; and the Certainty of its Principles, or Theory, consists in the finding out the exact Strength of the Contractile Powers of the Fibres; and the only Means we have to judge of the Strength of the Solids, and their Contractile Powers, is the Pulse, the most

most certain Indication of Strength or Weakness, as we have clearly demonstrated in the last Chapter of the first Part: For by this Means we shall be able to judge with the greater Exactness, of all the various Phænomena's of Nature, whether under a State of Health, or Violence from Diseases; for the Quantity of the Blood being ever in Proportion to its Fluidity, and its Fluidity always answering to its Division, which is greater or less, as its Velocity is more or less intended or remitted, from the Impulse of the Heart, and Contractile Power of the Arteries; all of which, as we have already observ'd, is to be estimated from the beating of the Pulse.

THE Pulse, therefore, will give us a clear Idea, in what State the Blood and other Juices are, and whereupon the several Degrees of Diseases depend; and when we have once discover'd this Connexion of Causes and Effects, we shall not be at a Loss to know what Applications, and Doses of the Medicines, will be most suitable to the several Degrees of the Malady. Now the Physician, if he attends carefully to the Nature of Things, as they are naturally carried on in the Body, cannot be mistaken in judging of the Disease; for wherever the Symptoms of Pain are, there he will be sure to know the Part affected, or the Organs indispos'd.

If the Patient complains of a pungent Pain on either Side, I know the *Pleura* is the Part affected; and I distinguish it from an Inflammation of the Lungs by the Shortness of Breath, that is always more intense in the latter.

INDEED, sometimes, from the Vicinity of Parts, one Disease may be so like another in all its Essentials, as not to be distinguish'd by the nicest Observations; yet, in such Cases, has Nature generally

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generally been so indulgent to Mankind, as to make the Cure of those Diseases, so nearly related, in a great measure depend upon the same Applications.

AND, I must confess, that the Symptoms of Pain, tho' they comprehend a great deal in the finding out Diseases, yet are they not the only Marks and Tokens, by which we discover their several Degrees and Variations; for, in some Diseases, the Perception of Pain is lost, as in Apoplexies, Syncope's, &c. and yet, even in these Disorders, that give the greatest Disturbance to human Nature, and bring Life into imminent Hazard, we have the clearest Evidence from whence they proceed, and what Methods we ought to apply for their Recovery, if recoverable.

WE see plainly, by the Conduct of our Senses, the Loss of Sense, and Deprivation of all the external Motions; and, by the beating of the Pulse, we discover the Languidness of all the several Springs of Life, whereby we are easily directed to make such Applications, as may repair, invigorate, and restore languishing Nature.

BUT as I design to publish an Essay upon Diseases of the Head and Nerves; so I shall wave their farther Prosecution in this Treatise, and go on to consider the Nature of Medicines, and the Reason of their Applications, and the Grounds upon which we have founded those Reasons.

C H A P. V.

Of the Cure of Diseases in general.

NOW, as we have endeavour'd to demonstrate in the former Parts, that all Diseases must arise from the Contraction of the Solids, elevated or depress'd above or beneath the Balance of Nature, and from the several Degrees of Tenuity or Viscidity of the Fluids consequent thereupon, and obstructing in different Parts of the Body; and that this different Motion of the Solids must affect the sensible Evacuations, and intend or remit that Quantity of the Fluids they ought to part with, in Excretion, under a sound State of Health; so shall we consider the best Methods, in order to render the partial Evacuations even and regular, in order to restore the Texture of the Solids to their just Tensity, and in order to reduce Nature to her perfect Balance.

UPON reconsidering these Points, I have this farther to add, that it will be impossible to make any considerable Progress in the Cure of Diseases; unless we can find out a Set of Medicines, that may serve all these several Intentions.

I HAVE often thought, that it would highly contribute to the Cure of Diseases, if we had a universal Treatise of Medicines, class'd under their proper and distinct Arrangements, with their several Degrees of Strength and Operation; the strongest always standing foremost, and, by a gradual Progress declining, till they come to the

R. weakest;

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weakeſt, or thoſe fitteſt for Children: For our great Maſter *Hippocrates* has juſtly obſerv'd, that ſtrong Medicines ought only to be given to ſtrong Bodies, and that we can never expeſt to overcome the ſtrong Qualities in any Medicine, by giving it in leſſer Quantities to weakeſt Conſtitutions.

THIS, I think, ſhould be a very good Caveat to our modern Quacks, who generally uſe but one and the ſame Medicine, in every Disease, and to diſferent Conſtitutions.

As we have endeavour'd to derive the Caufe of all Diseases from either an over-teneſe, or over-lax State of the Solids, which denotes them either Acute or Chronic; ſo, in their Cure, we muſt be careful to keep up the ſame Diſtin&ions, and unbend or relax the Solids, when too much diſtract-ed with their Fluids, as always happens in Acute Diseases, and brace or reſtore their over-languid Fibres, when too much relax'd, which is their State under moſt Chronic Indiſpoſitions, and, upon which two Points turns the Cure of almoſt all Diseases, that can affect the Body.

BUT then, the greaſteſt Diffiſulty lies in beiſg able to accoſpliſh theſe two Intentions, and what Requiſites will be neceſſary, in order to bring the Conſtitution under a juſt Balance; for I muſt confeſſ, that Tension and Relaxation of the Solids are vague Words, and expressive of very little, in the partiſular Application of Remedies.

WE muſt therefore conſider the ſeveral Degrees of their Tension and Relaxation, and the Siziness and Viscidity of the Fluids conſequen- thereupon, and the Evacuations that are obſtruct-ed under thoſe diſferent States of the Blood.

AND, as moſt Acute Diseases arife from an obſtructed Perspiration, which ſudden- ly encreaſes a Load upon the Conſtitution, greater than the Solids

Solids

Solids can manage ; so the Cure must consist in diminishing the Quantity of the Fluids, and relaxing the Constitution of the Solids, by subtracting from the Cause.

FOR as most Acute Diseases, and especially Fevers, arise from the Blood's dividing or rarefying faster than it can be flung off by the cutaneous Emunctories, or, indeed, by any of the sensible Evacuations; so those Medicines will have the greatest Influence, that will best enlarge those Discharges, such are Bleeding, and all oily, softening Medicines, that relax the over-tense Springiness of the cutaneous Glands; to these follow those Medicines that will excite a Breathing Sweat, which will easily and certainly succeed, if this Method of giving Oils, and Bleeding before their Administration, be but attended to.

B U T if, notwithstanding the best Administrations, a plentiful Breathing is not to be effected, during the Progress of the Disease, Bleeding is to be repeated, or Cupping-Glasses apply'd to the Shoulders; and, towards the Height, an Effort is to be made upon the Bowels, by purging, and, unless this be timely done, there will be great Danger of an Hemorrhage, breaking out at either the Eyes, Ears, or Nose, which must infallibly kill the Patient.

IN this Case, to commit the Stress of the Cure to Bleeding, would too much diminish the Strength ; therefore, after the Application of Blisters, and continu'd by Times, always adding fresh ones, as the former dry up, let a Cathartic Potion be exhibited, and by Times repeated, as Occasion requires.

This is the only proper Means, in solving Fevers, when the cutaneous Glands are naturally so tense, as that a plentiful Breathing cannot be

procur'd; but, certainly, a Sweating Course, kindly rais'd, is the most natural Way of solving Fevers; for the cutaneous Discharges being the most considerable, will soonest give Relief, by evacuating that additional Load; but in Cases where that cannot be procur'd, we must insist upon the Purging Course, that being the next most safe Method; that by Vomiting, which Dr. Woodward

*Dr. Woodward's
Mistake in
admini-
string Vo-
mits in the
Height of
Fevers.*

recommends in the Crisis of both Fevers and the Small Pox, must often be attended with most fatal Consequences, from the Violence of the Operation of those Kind of Medicines, under such pressing Weaknesses, as most generally attend the worst of Fevers in their highest *Stadia's*.

WE observe 'em difficult enough to manage even in the strongest Constitutions, labouring under the slightest Indispositions from Chronic Diseases, and the Body much more able to bear their Operation.

IF ever they are proper to be given in Fevers, it must be in the very Beginning, whlie there is Strength to support their Operation, not when it is almost destroy'd by the Violence of the Disease.

IN such Cases, the Patient must fall in the Conflict, and owe his Doom, in a great measure, to the too rigid Rashness of his Physician, thereby helping on the Disease to finish its fatal Catastrophe.

NOT so are Fluxes of the Belly, another Species of Acute Diseases, to be treated; for as these Disorders proceed from a preternatural *Stimulus* irritating the Peristaltic Motion of the Stomach and Intestines; so the best way to relieve those Affections, is to abate the *Stimulus*; and the best Way to abate the *Stimulus*, is to evacuate the morbifick Matter, the Cause of the *Stimulus*; and that Operation is best effected by gentle Vomits, especially

cially in the Beginning, which seldom fail to cure the Disease, more especially if some softening and gentle Astringent Medicine be discreetly given after its Operation; but even in these, that, of all Acute Diseases most favour the Intention of Vomits, they prove pernicious, if administer'd after the Flux has been of long Continuance, and the Strength greatly impair'd; then, the only Means left to abate the *Stimulus* is to move the Bowels by gentle Purgatives of Rhubarb, join'd with other assisting Medicines, which seldom fail to carry off the Cause, and cure the Disease.

NOW we are to consider the Cure of Diseases arising from another State of the Solids, wherein the Blood forms Viscidities, and, of Consequence, Chronic Diseases, and it then forms Viscidities, and, of Consequence, Chronic Diseases, when its compounding Particles go into too close Contact; and they go into too close Contact, when they receive not due Information from the Solids; and they receive not due Information from the Solids, when their Contractile Powers are impair'd and sunk, in their Motions, beneath the Balance of Nature.

OUR Business, therefore, in the Cure of Chronic Diseases, is to get acquainted with a Set of Medicines, that will raise the Impulse of the Solids, that will encrease their natural Springiness, and restore their *Machinula*, upon which their Contractile Powers depend.

THESE Intentions effected, the Solids will go on to fuse the Blood, to destroy its Viscidities, to divide its Particles, and render them small enough to pass the Secretions; and when all the Secretions are brought to their proper Plight, the Evacuations will be regular; in which Condition, the Animal Oeconomy ever acts with Pleasure,

and which is an Absence or Freedom from Diseases.

As the Solids, under Chronic Diseases, always want informing, and as there is generally a Load of Juices charg'd upon the Habit; so the properest Method is, to begin the Cure with those Medicines that evacuate the first Passages, to which Purpose both Vomits and Purges may be necessary, from whose Operation we generally perceive the greatest Effects to ensue.

AFTER the Juices, by their Administration, are brought to their natural Quantity, we must endeavour to brace the Solids, and restore their Contractile Powers, upon which the Cure of most Chronic Diseases entirely depend, always remembering to distinguish between the Removal of the Fits and Cure of the Disease, especially in those Diseases attended with Paroxysms, as the Asthma, Stone, intermittent Fever, and the Gout.

WHATEVER, therefore, will best promote the Motion, Fluidity, Texture, and Spirit of the Blood, will best effect the Cure of Chronic Diseases; all which are wonderfully answer'd by Medicines of brisk, volatile, and active Parts: such are the Volatile Salts of all Kinds, and most of those Medicines that go under the Names of Cephalic, Nervine, and Cardiac Remedies, and which consist of Particles extremely penetrant, that dissolve the Concretions of the Blood, and prevent its falling into preternatural Cohesions; that is, to speak in one Word, that best raise the Impulse of the Solids,



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DISEASES.

P A R T V.

Of the Cure of Acute Diseases.

Introduction.



ALL those Authors that have writ upon the Subject of Diseases, with the Approbation of the learned World, have ever distinguish'd the Cure of the Symptoms from the Cure of the Disease.

AND, in Practice, I have constantly observ'd, that, in some Cases, unless you first abate the Intensity of the Symptoms, it will be impossible

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to make any considerable Progress in the Cure of the Disease.

THE Difference between the Cure of the Symptoms that attend Acute, and the Fits of Chronic Diseases, consists chiefly in this, that the Removal of the former cures the Disease, or so greatly lessens its Force, as generally to leave but little to do afterwards; while the Cause of the latter remaining, will excite the same Tragedy again and again, if not timely remov'd; and this Difference appears chiefly in Diseases of the Blood, when its Motions are elevated above the Balance of Nature, as in Inflammatory Fevers, Pleurisies, Peripneumonies, &c. where the Removal of the Symptoms, for the most part, proves the Cure of Disease.

BUT far different is the Cure of Chronic Diseases; for the Removal of the Fits of the Stone and Gravel, the Gout, the Rheumatism, the Asthma, inveterate Head-Achs, &c. only entitles him to a transient Relief, if Care be not taken at the same Time to fence against their Return; they, or any of them, will assault him after the same Manner again and again, or perhaps worse, and, by its frequent Returns, will commit such Ravages upon the Constitution, as will render the Disease still more desperate to cure.

IN all, or most Diseases, the greater the Pain is, the more dangerous the Symptoms, and the quicker will be the Dispatch of the miserable Patient; not, but as to the Danger attending Diseases, a due Regard must ever be paid to the Parts affected; for the Fits of the Stone, when they arrive to any considerable Height, are the most painful of any that afflict the Body, yet seldom do they bring Life into those dangerous Hazards, as often attends the severer Symptoms of Pleurisies, and other

other Acute Diseases, they fail not to bring present Death, and are frequently known to kill in a few Hours.

FOR this Reason, I have chosen to treat of their Cure first, because their sudden Attack, Acuteness, and Severity, require more Exactness and Circumspection in their Management, and one false Step may prove of pernicious Consequence.

INDEED, I must confess, it is no small Happiness to the Physician, when he has the good Fortune, in such Cases, to be call'd in the Beginning; for then he has a favourable Opportunity, very often, put into his Hands, of obviating those fatal Symptoms, that many times arise to a great Height before Advice is demanded; and it is a Misfortune attending too many People, that they never call the Physician till the Desperateness of the Disease make his Presence necessary; a Fault scarce pardonable, when so many Gentlemen are to be met with almost in every Corner of this great City.

HOWEVER, I shall take the same Method in treating of the Cure of Acute Diseases, I did in examining their Cause, and shall first consider the Nature of those Diseases, in Relation to their Cure, that affect the first Passages.

C H A P. I.

Of the Cure of Vomiting.

L T H O' Vomiting, whether spontaneous, or excited by Medicines, is greatly helpful in the Cure of many Diseases, incident to human Nature; yet if it exceed in Quantity, or violently persist to vex the Patient, after the Load is discharg'd, it calls for speedy Relief, to quell its preternatural Motions.

T H E R E F O R E, in all Cases, let the Patient immediately be conducted to Bed, that being the properest Station in all Vomitings, and then our next Business is carefully to examine what Remedies will be properst to repress the Disorders of the Spirits, asswage the Tumult of the Stomach, and abate the Violence of Vomiting.

I N this Case, chiefly, and before all others, I prefer Topical Applications, or those that are made outwardly to the Stomach, which mightily contribute to the quieting the Orgasm of this Bowel.

I N the first Place, therefore, let the Stomach be very well embrocated with Flannels, wrung out of Spirit of Mint, burnt Claret, and, when the Vomiting is asswaged, apply a warm Stomach-Plaister, besmear'd with Aromatic Oils, to the whole Region of the Stomach. In the mean time the Stomach has Time to recover its Tone, and then the Patient may take a Spoonful of burnt Wine, or some generous Cordial, always rememb-

bring,

bring, that Vomiting is soonest stay'd by the least Quantities of Medicines.

IN all Vomitings, the following Medicines are generally prescrib'd with good Succes.

*R. Sal. Absinthij. 3ij. Succ. Limon. 3*fl*, vel 3vj.
m. f. Haust. quamprimum sumendus.*

IF this be rejected, let the following be given an Hour after.

*R. Sal. Absinth. 3ij. Spirit. Menih. gutt. xx. Succ.
Limon. 3vj. Syr. e Mecon. 3vj. m. f. Haust.*

BUT if the Vomiting be excessively violent, and Reachings attend it, then administer the following Opiates.

*R. Spirit. Vitriol. 3j. Spirit. Menih. 3ijj. Laud.
Liquid. Syden. 3*fl*. m. gutt. xl. 4ta, 6ta, vel
7ma quaque hora, in Coch. ij. Julap. seq.*

*R. Aq. Font. Aq. Peon. Comp. a 3ijj. Aq. Ceras.
Nigr. 3ij. Succ. Limon. 3*fl*. Marg. præp. 3ij.
Syr. Limon. 3j. Sp. Nit. Dulc. 3j. m. Julap. in
usum Gutt. prescript.*

THIS Method I have scarce ever known to fail, in relieving the most obstinate Vomitings.

BUT, this I must beg Leave to observe, that, in all Cases where the Stomach is the primary Bowel affected, great Care must be taken, not to give any thing that may create a *Nausea*, or Loathing; for some People nice of Constitution, are so squeamish, as scarce able to bear the most grateful Cordials that can be prepar'd.

IN all preternatural Vomiting, we ought diligently to enquire whether it be critical, symptomatical, or spontaneously proceeding from the Disorders of the Stomach. All critical Discharges by Vomiting are greatly helpful to Nature, so long as they exceed not the Strength of the Patient, and, therefore, are by no means suddenly to be repress'd.

IN symptomatical Vomitings we must enquire into the original Disease, and by removing or palliating that, this will easily be subdu'd, or vanish of its own Accord.

As to what respects spontaneous Vomitings, if the Patient be troubl'd with great Oppression about the Pit of the Stomach, a gentle Emetic of the *Rad. Ipecacuanha*. will be most proper to evacuate that thick, crass, viscid Phlegm, that often lies impacted in the *Plie*, or Folds of the Stomach, and excite Vomiting,

AFTER the Operation is over, I generally prescribe some agreeable Opiate, to still the Disorders of the Stomach, which most commonly sets all things to rights again.

B. Aq. Ceras. Nig. ʒiʒ. Paon. Comp. ʒvj. Syr. Garyoph. ʒʒ. Laud. Liquid. gutt. xx. m. f. Haust. cap. finita operatione Vomit.

IN the Cure of all Acute Diseases, our first and chief Care is, to examine what Parts or Organs remain hurt, or indispos'd, after the Violence of the Symptoms are over; and those Parts will remain most indispos'd or affected (in all Cases) where their Violence was greatest; and only by considering the Constitution of the several Parts, shall we be able to know, what Ravages the Symptoms have left upon them.

IN great and violent Vomitings, as sometimes happen, when the Stomach has, as it were, got a Habit of Vomiting, it will demand our greatest Care to consider, what Medicines may be proper to restore its impair'd Tone, which never ceases to suffer, when Things come to this Extremity; for in all extreme Vomitings, the Contractile Powers of the Fibres are above their natural Balance, which continue so, till they are quite spent and worn out, and then they sink beneath, in Proportion

as,

as, in Vomiting, they were rais'd above their Balance.

Now, to restore the Contractions of the Fibres to their just Tensity, and raise the digestive Powers to their natural Standard, nothing so well serves this Intention, as Bitters rightly suited to the Exigencies of the Case.

R. Fol. Absinth. Rom. 3ij. Summ. Centaur. Minor. 3ij. Sem. Cardam. Minor. Coriand. a 3j. Rad. Gentian. 3j. Coq. in Aq. Fontan. ttj. ad 3x. cui adde Aq. Paon. Comp. 3iv. Spirit. Nit. Dulc. 3j. m. Infus. Cap. Coch. vj. omni mane duobus horis ante Prandium, & hora quarta vel quinta Pomeridian.

OR, in Case, the Patient has been mightily addicted to hard Drinking and late Hours, the following Prescription will answer the Case better.

R. Sum. Abrotонij 3ij. Flor. Chamomel. pugil j. Rad. Gentian. 3j. Sem. Cardamom. Minor. Rad. Galang. a 3j. Cortic. Flavid. Aurant. 3ij. Coq. in Aq. Font. vel infund. frigide in Vin. Alb. ttj. Vin. Chalybeat. 3iv. Aq. Menth. Aq. Absinth. Maj. Com. a 3iij. m. Infus. Capiat Coch. quinq. post dosin Pillul.

R. Chel. Canc. prep. Marg. prep. Pulv. Rhabar. a 3j. Chalyb. cum Sulph. prep. 3ij. Extratt. Gentian. Pillul. Stom. cum Gum. Ruffi, a 3j. m. Massa cum q. s. Syr. de Chalyb. formentur pillul. Oc. Canc. obreuend. Capiat quatuor omni mane & hora 4ta pomeridian. cum Coch. quinq. Infusionis.

THESE Medicines mightily help those that are subject to Morning Reachings, or Vomitings, from an over Night's Debauch.

C H A P. II.

Of the Cure of Fluxes.

AS no Looseness can attend the Bowels, scarce, but from their Peristaltic Motion elevated above their due, natural Balance from redundant, vicious Salts, continually flowing from the Gall and Pancreatic Ducts, whose Orifices are inserted into the *Duodenum*, for the Discharge of their respective Juices; so have we, in the former Parts, endeavour'd to prove, that those Salts give that natural Motion we call Peristaltic, or Vermicular, to the Intestines, whereby they facilitate the Descent of the Excrements; so have we endeavour'd to prove, that when those Salts are in Excess, or vitiated, those natural Undulations will be smarter upon the contain'd Excrements, which will cause 'em to descend quicker than the natural Balance of the Intestines would discharge.

HENCE follow the Diarrhoea, Dysentery, and, if the Stomach be greatly impair'd, the *Cholera Morbus*, which last, generally, is attended with most terrible Symptoms, that unavoidably bring on Wastes, Decays, and an universal Consumption of the whole Body, if not timely prevented; for the *Cholera* being an Affection, wherein great and sudden Evacuations are made, both by Vomit and Stool, gives the Patient scarce a single Chance for his Life, if those Symptoms are not speedily mitigated.

WE

WE ought not to be over-officious in stopping a recent *Diarrhoea*, for it often is of great Benefit to the Body, especially if it happens in the Spring or Fall of the Leaf; for at these Times the Air varying its Spring, obliges the whole vascular System of the Solids to redouble their Contractions, whereupon the Fluids being more divided, run to the Bowels for a Vent; and unless at such Times this Discharge be intended, the Body may suffer great Hazards from Fevers, Rheumatisms, &c.

I KNOW, some prescribe Bleeding in the Beginning of Fluxes; but I see no Necessity for that Operation, unless a *Plethora* appear in the Blood-Vessels.

MY usual Method is, to prescribe a Dose of the *Ipecacuan*. and work it gently off.

AFTER the Operation is over, I generally order the following Mixture, which never fails to relieve both that Hurry of Spirits and Faintness, the great Discharge by Stool is apt to occasion.

R. Aq. Cin. Hord. ʒiv. Aq. Cin. Fort. Theriac. Ȑ ʒiſ Confect. Alkerm. ʒij. Laud. Liquid. Syd. gutt. xl. Syr. Cydon ʒj. m. f. Mixt. Cap. Coch. ij. finita operatione Emetic. & postea quarta quaque hora, pro re nata, vel post singulas Sedes.

BUT in very weakly Constitutions, instead of the Emetic, I generally order the following Bolus.

R. Pulv. Rhei Ȑj. ad ʒȝ. Ol. Nuc. Moschat. Ol. Cin. Ȑ gutt j. Confect. Fracastor. sine Melle Ȑij. m. f. Bol. Capt. statim, & repet. pro re nata. Bibat Decoct. Album pro potu ordinario.

THUS far in a simple *Diarrhoea*, where no Vomitings attend; and, in the *Dysentery*, the Intentions are much the same, save that the following Clyster may be added, and the Patient, instead

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stead of the *Decoction Alb.* may drink Milk, in which is boil'd a Handful of common Mallows.

*R. Vin. Rub. tib. Diascord. fine Melle ʒj. m.
Enema quamprimum injiciendum, & repet.
pro re nata.*

BUT if the Disease arises to the *Cholera*, and the Discharge is violent, both by Vomit and Stools, then, indeed, it calls for Variety of Applications; and, in this Case, as the Vomiting is always more dangerous, so must we endeavour to appease it in the first Place; for, while that Disorder continues, there is great Danger of its turning to the Iliac Passion, especially if Stools be but sparingly supply'd downwards.

*R. Aq. Menib. Cin. Fort. a ʒj. Syr. Limon.
3vj. Sal. Absinth. 9j. Laud. Liquid. Syd.
gutt. xx. m. f. Hauſt. statim sumendus.*

IF this be rejected, let the following Medicine be given about an Hour after, especially if the Vomiting be extremely violent.

*R. Pil. ex Duobus ʒβ. Laud. Lond. gr. iijβ.
Calomel. gr. xv. m. f. Pillul. vel diffol. in
Syr. Violar. & cap. statim.*

ONCE order'd this Medicine in a Case most desperate, and where the Patient was in the utmost Agony, from a Vomiting and Loosness; but when I came, the Flux was staid, which encreas'd the Vomiting and Agony of Pain; a plentiful Discharge of fetid, dark Matter was procur'd by Stool, which extremely reliev'd the Vomiting, and greatly abated the Pain, and, to prevent a Relapse, I order'd the following Bolus and Draught every Night.

*R. Pulv. Rhei gr. xv. Confect. Fracastor. fine
Melle ʒβ. Croc. Pulv. gr. vj. Ol. Cin. gutt. j.
m. f. Bol. Cap. hora somn. cujusque noctis
superbib. seq.*

R. Aq.

*R. Aq. Menth. ʒj. Aq. Pæon. Comp. ʒʒ. Sp.
Cerasor. Nigr. ʒij. Syrup. Cydon. ʒʒ. m. f.
Hauſt.*

B U T in Case all these Medicines fail of Success, and the Flux still continues to afflict the Patient, and threaten him with imminent Death, is there no other Hopes, no Anchor, whereon the unhappy Patient may repose his Distress, no Specific that may give Respite to his Dolors? Yes; we are told by Dr. Cockburn, in his Treatise of Fluxes, that he enjoys the Favour of a Specific, that will cure all manner of Fluxes, under the most distracting Symptoms.

B U T no Distress of Mankind could ever, yet, prevail with that Gentleman to open his tender Heart, and discover this mighty Secret to the World; and therefore, to supply that Defect, I will beg Leave here to insert a *Formula*, that, I have the greatest Reason to believe, will restore, in all Fluxes, tho' never so dangerous, if seasonably administer'd.

I T consists of three Medicines, a Bolus, an Electuary, and Julap, which have the same Influence, whether it be a simple *Diarrœa*, Dysentery, or *Tenesmus*; it also greatly helps in the Celiac Affection and Lientery, and in the lesser Degrees of the *Cholera*.

I N all Cases of Fluxes, when I am call'd in good Time, especially the *Cholera*, I order the Patient to drink plentifully of Milk and Water, in which have been boil'd a Handful or two of Mallows, which never fails to cure the lesser Species of Fluxes; for it being a soft Liquor, greatly dilutes the Salts of the Bile, and keeps their *Stimulus* from preying upon the Intestines; by which Means the Flux immediately abates, and is entirely remov'd by a gentle Opiate administer'd a little after.

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BUT

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BUT in Cases of extreme Danger, where the Strength is greatly distress'd, thro' Continuance of the Flux, the following will prove a never-failing Prescription.

*R. Pulv. Rhabarb. torrefact. gr. xij. Diacord.
Theriac. Androm. a gr. xv. Croc. Pulv.
gr. iiij. Ol. Cin. gutt. j. m. f. Bol. statim
sumendus.*

*R. Julap. Reg. Aurat. in Appendice bujus libri
præscript. tbß. Cap. Coch. iiij. cum omni
Dof. Electuar. sequent. post singulas sedes.*

*R. Suber. subtiliss. pulv. Spong. a 3iij. Cons. Cy-
nosbat. 3iβ. Sem. Hyosciami 3jβ. cum. q. s.
Syr. Balsam. m. Elect.*

THIS is that great Specific, simple as it may appear, I have ever kept as a Secret, and which I now publish for the Benefit of Mankind; solemnly protesting, that I never knew it once to fail in the whole Course of my Practice, and believe it never will fail, where there is a Possibility of restoring the Patient; for the *Suber* is not only of an Alkaline, softening Nature, but greatly absorbent, whereby the preternatural *Stimulus*, or Salts of the Bile, are as it were sheath'd, and their pungent Particles destroy'd from creating any farther Disorders.

IN the Dysentery, the Milk and Mallows are better than the Harts-Horn-Drink; for they soften the Bowels, and render the corroding Salts less sharp.

THE *Julapium Regium Auratum* helps, mightily, to restore the Tone of the Stomach and Intestines, greatly impair'd by the Violence of the Discharges: So that here is the softest, the pleasantest, and most effectual Cure, that can be desir'd in all Fluxes.



C H A P. III.

Of the Cure of simple, continual Fevers.

ROM prosecuting the Cure of acute Diseases, that attend the first Passages, proceed we, in the next Place, to consider the Cure of those that act their Scene in the circulating Fluids; and Fevers are among the first Disorders, that disturb humane Nature, whether in our Times of Youth and Infancy, or when grown up to more mature Age; and, as they often prove mortal, and Danger always attends their highest Stadia's, so I shall take Care, to intend their Cure, in all its minute Circumstances, with the properest Methods, to rescue the Patient from the most distracting Symptoms.

No Body can be ignorant of the many and various Opinions that have of late Years been advanced concerning the Subject of Fevers, and the different Notions introduc'd to support their Cure.

BUT I shall, in the Prosecution of this Subject, beg leave to be concluded by no Authorities, but those that Nature will warrant; for what she designs, that she constantly executes, or, at least, endeavours to execute, if not prevented by the superior Power of a Disease; and it's not safe, in any Case, to judge of what she intended, but from the Effects of her Operations.

IN the third Chapter of the second Part, we have endeavour'd to ground the Cause of all Fevers upon the Blood's dividing faster than it can

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be detach'd by the several Emunctories, from an Elevation of the Solids above the Balance of Nature, which charges a Load upon the Solids greater than they can bear, from which we have endeavoured to account for all the Symptoms that can attend Fevers.

THOSE Medicines, therefore, will give the most advantageous Turn in Fevers, that soonest relax the over great Tension of the Solids; and those Medicines will best answer this Intention, that will soonest evacuate, by subtracting from the Cause, and decreasing that additional Load.

BUT no Remedies do this so speedily, as those that procure a plentiful Breathing, and therefore we must consider the best Methods how to effect a plentiful Discharge, by the Cutaneous Emunctories, of all other Evacuations the most proper, in solving the severest Phænomena's of Fevers; because the Discharges made by a plentiful Breathing are largest, and equal, if not exceed all the other Evacuations of the Body; because the Cutaneous Emunctories are most aply fitted to form this Discharge in all acute Diseases, that depend upon the circulating Fluids; and lastly, because a plentiful Breathing will soonest relieve the impending Symptoms, and destroy their threatening Effects.

THE best Remedies to begin the Cure of Fevers, therefore, are those that relax the over-tense Solids, among all which, Bleeding is supreme, as it suddenly lessens the additional Quantity of Blood, and removes its Load. As soon, therefore, as ever the Physician is sent for, in acute continual Fevers, his first Care is to meditate upon Bleeding, which will be a Crime to omit, if he be called in the beginning of the Disease, and find the beating of the Pulse will bear it.

IF there be any Signs of a *Plethora*, twelve Ounces of Blood may be taken away the first time, and that Operation repeated twelve Hours after: In some Cases, where an extreme Loathing afflicts the Stomach, and grievous Pains the Head, a gentle Vomit may be given, especially if the Fever arose from the eating or drinking any Thing disagreeable.

THESE Operations over, if Breathing does not appear, we must endeavour to push that Evacuation by proper Sudorifics, in which Case, one or more of the following Medicines may be given, and repeated as often as Occasion requires, always rememboring to keep as clear of all hot, spirituous Cordials, and Volatile Salts, as possible, which only can serve to encrease the Heat, and heighten the Fever, to the Destruction of the Patient.

R. Pulv. è Chel. Canc. C. 3ij. Marg. præp. gr. xij. Champbor. gr. jß. m. f. Pulv. sexta quaque hora sumendus superbib. Coch. iiiij. Julap. seq.

R. Aq. Last. 3vj. Aq. Pæon. C. 3ij. Marg. præp. 3j. Sal. Vol. Ol. gut. xx. Sacch. Al-biss. 3ij. m. f. Julap. Vel, si Bol. magis placet, exhibe seq.

R. Pulv. è Chel. Canc. C. fine Bezoard. 3ij. Pulv. Viper. gr. iiiij. Croc. gr. iiij. Confect. Alkerm. q. f. m. f. Bol. Cap. sexta qua- que hora, superbib. copiose seri laetis vino Canarino alterati.

DURING the Intenseness of the Fever, the Patient's common Drink ought to be the most slender Liquids, such as Water-gruel, Barley-water, or Posset-Drink, Sack-way, Sage-Tea, or the following, which I think in Fevers, attended with intense Burning, preferable to all the rest.

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*R. Fol. Salv. rub. Manip. j. Sacchar. Albiſſ. 3ij.
Limon. cum toto Concif. N°. j. Cochinel. 3f.*
*Aq. Font. ferueſabit. t̄biij. flent ſimul in
vafe vitrio bene obturato per horas ſex, Col.
& bibat pro potu ordinario.*

In the Point of Bleeding, we cannot exactly determine the Quantity to be taken away, for that depends upon the different Age, Sex, and Constitution of the Patient: Those of a sanguine Complexion, and in their youthful Vigour, can spare more, than those that are declining from thofe Circumstances; and more Blood ſtill may ſafely be taken away in a *Plethora*, than in any other Case whatever.

BLOOD ought to be let, in the beginning of the Fever, and repeated in twelve Hours, in Case the Symptoms abate not; but towards the State of the Disease, if there be a Necessity for further Discharges of this Fluid, we ought to apply Cupping-Glasses to the *Scapula's*, and extract Blood by Scarrification.

ALL these Methods are intended to relax the Solids, and gain a plentiful Breathing, which is the only way, in all Fevers, ſafely to remove the Symptoms, and in no wife, if the Patient is young, muſt we deſift from this Practice.

FOR this purpoſe, the Patient ſhould be exhorted to drink plentifully of diluting Liquors, which will greatly help to relax the Fibres, and take Care at the ſame time, you do not take him up during the Continuance of these Breathing-Sweats, ſo neceſſary to a perfect Solution of the Fever.

IF the Body be coſtive, a Glyſter may be admihiſted, and repeated every other Day. This is the only Method to be continued while the Symptoms are not extremely dangerous.

B U T

B U T in the *Causus* or burning Fever, Blood, to the Quantity of twelve or sixteen Ounces, is immediately to be extracted from the Arm; or if any Symptoms of a *Stupor* appear, from the Jugular Vein; and after that Operation is over, if the Pulse flattens, apply immediately either a large Blister between the Shoulders, or two behind the Ears, extending to the Sides of the Neck.

I M U S T confess, that even in the *Causus*, I have no Opinion of Blisters, but where the Pulse weakens, and the Symptoms threaten the Brain.

I F the Fever encrease, repeat Bleeding, especially if the Patient be hot, restless, and the Pulse beat high; but if the Pulse sinks, omit Bleeding, and go on with the following Medicines.

R. *Pulv. è Chel. Canc. C. Æj. Crystal. Mi-*

neral. gr. x. Cochinel gr. vij. Crœc. gr. iiiij.

Champhor. gr. jij. m. f. Pul. Cap. unam quar-

ta quaque Hora superbib. Coch. iiij. Julap seq.

R. *Aq. Lact. 3vj. Aq. Epidem 3ij. Spir Nitr.*

Dulc. 3j. Syr. Garioph. 3j. m. f. Julap.

R. *Amygd. Dulc. 3ij. Sem. Papaver. Erratic.*

3ij. Contund. quam optimè in marmoreo Mor-

tario sensim offund. ibij Aq. Hord. cui add.

Sacch. Albis. 3vj. Spir. Nitr. Dulc. 3ij. Aq.

Theriac. 3ij. m. f. Emulſio capt. Haſt. fre-

quenter.

A FTER the fourth or fifth Day, if he continues restless, you may venture upon a gentle Opiate, but cautiously must these Medicines be administer'd in the beginning of Fevers; for if too liberally used, they generally exasperate all the Symptoms.

R. *Aq. Cerasor. Nig. 3j. 3. Aq. Theriacal. 3vj.*

Syr. è Mecon. 3j. Spir. Nit. Dulc. gut. xx.

m. f. Haſt. Hora ſomni ſumendus, & repeten-

tur pro re nata.

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BUT, if notwithstanding the best Administrations, a Discharge by the cutaneous Emunctories is not to be obtained, by reason of the Glands, naturally being too tense; that then, and in such a Case, about the ninth Day, it will be highly necessary to make an Effort upon the Bowels, and endeavour to fling off the superfluous Juices by Stool, to obtain which Intention, the following Medicines will be most proper.

*R. Tinct. Sacr. 3ij. Syr. de Spin. Cervin. 3j.
Spir. Lavend. C. 3j. m. f. Hauſt. mane ſu-
mend. cum debito Regimine. Vel,*

*R. Pill. Ruffi 3j. ad 3ij. Pulv. Cornachini
gr. xij. Elix. Proprietat. q. f. m. Pil. N°.
5. pro Dof.*

IF the Patient burn very much, the following may be more agreeable.

*R. Fol. Sen. 3ij. Rhei. 3j. Sem. Coriand.
Cardamom. Major. a 3j. Coq. in Aq. Font.
Col. 3ij. cui adde Mann. diff. 3j. vel Syr.
Rosar. Damas. 3vj. m. f. Hauſt.*

AND when this Method of purging, in severer Fevers, has been omitted, especially where a plentiful Breathing could not be procur'd, I have made it my constant Observation, that the Fever has seldom gone kindly off, without a Looseness, or Bloody-Flux.

AND *Hippocrates* takes notice almost in every Case, of his Epidemics, of a Flux of Blood issuing from the Nose; and altho' he always judges it a favourable Symptom, and ranks it among his four prognosticating Signs, favouring Recovery, when it is in Quantity, yet is it a bad way of solving a Fever, if there be any other that may be more commodious, and certain in its Operation; and to make an Effort upon the Bowels, in my Opinion, after all other Methods have been try'd

try'd in vain, is both safer, and more agreeable, as it is the way Nature her self often takes, in solving the severer Fevers.



C H A P. IV.

Of the Cure of Inflammatory Fevers, especially the Pleurisy, Peripneumony, Emphyema, and Quinsy.

E are now to attend the Cure of acute inflammatory Fevers, which arise from a Glut of stagnant Juices, charg'd upon any Part, greater than it can dispense with, which excites an Inflammation, denominated a Plurisy, Peripneumony, Quinsy, St. Anthony's Fire, acute Rheumatism, &c. according to the different Parts, in which it makes its Lodgment.

BUT of all Inflammatory Diseases, a Pleurisy is the most dangerous, as it directly affects the Lungs, Pleura, Intercostal Muscles, and Diaphragm, those principal Organs of Respiration.

THE Symptoms most dangerous, and to which we ought to pay the greatest Regard, in its Cure, are extreme difficult Breathing, a most acute intense Pain, pricking as it were with Needles, join'd with a very troublesome and disturbing Cough; and if we can but find any Ways or Means to mitigate those more violent Symptoms, all the others of Fever, Restlessness, &c. will easily abate of themselves; being, that they have their Dependance wholly on the former, and rise or fall, just as they are either intended or remitted.

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WHATSOEVER Medicines, therefore, will contribute most readily to the Evacuation of those stagnant Juices, will soonest relieve the difficult Breathing, will soonest abate the intense Pain, will soonest remove the troublesome Cough, and, of Consequence, all the lesser Symptoms attending them; and those Medicines will best answer all these Intentions, that will soonest relax the Solids, and render their Contractions more pliable, that will soonest raise a plentiful Breathing, and promote Expectoration.

IN both these Cases, Bleeding is the most sovereign Remedy, whereby, as in continual acute Fevers, we suddenly subtract from the Cause, and, in a Moment, ease all the distracting Symptoms of acute Pain, and difficult Breathing.

NOR does it only relieve inflammatory Diseases of the Breast, but greatly avails in the acute Rheumatism of the Limbs, or Joints, as also in extremely acute Pains that affect the Stomach and Bowels.

WE must, therefore, in the first Place, and before all other Remedies, administer Bleeding, and repeat that Operation against the Signs of the Pulse, especially if call'd in the beginning, for, in some very acute Pleurisies, I have known the Pulse overwhelm'd with the Quantity of Blood, which upon Extraction of a good Quantity, has risen considerably, and caus'd all the bad Symptoms to retreat.

THE next Medicines that promise most towards a Cure, are those that raise a plentiful Breathing, and dispose the stagnant Juices to a freer Circulation; such are all Sudorifics, to which we must join Sal Volatiles, and those of a balsamic Nature, that while they assist Expectoration, widen the Diameters of the smaller Vessels, and give the Juices greater Room to play.

AFTER

AFTER Bleeding, and that Operation repeated, if Occasion require, the following Medicines will greatly contribute to easing of the Pain, and difficult Breathing.

- R_o Sperm. Cæti 3ij. Sacch. albif. 3ij. Ol. Amydg. Dulc. Syr. Papav. Errat. & 3ij. Sal. Prunel. 3j. m. f. Linctus. Cap. Coch. unum quarta quaq. Hora superbib. tib. sequent.
R_o Decoct. Pectoral. tib. Syr. Alth. 3ij Spir. Nit. Dulc. 3ij. Aq. Theriac. 3iiij. m. Apozem.

If the Pain continue violently to afflict the Side, let twelve Ounces of Blood be taken away for the third time, in case he has been blooded twice before, and then the following.

- R_o Globul. Fimi Equini non Cast. 3ij. Coq. in Aq. Puleg. tib. cui adde Syr. de Praf. 3j. Sal. Vol. Ol. gut. xxx.m. Cap. Coch. iiiij. quarta quaq. Hora.
R_o Ol. Lin. sine Igne extract. 3j. Syr. è Mecon. 3vj. m. Haust. hora som. sumend.
Bibat Decoct. Pector. & Aq. Hord. & tib. Aq. Cin. Hord. tib. pro potu ordinario.

If a plentiful Breathing, and laudable Expectoration succeed, upon the Administration of these Remedies, we must use all our Endeavours to promote 'em, and by no Means suffer them to flag, during the Continuance of the Disease, or at least till the Crisis is over, which in the milder, is judg'd about the seventh Day; but in the more dangerous Sort, not till the fourteenth or seventeenth.

IN this Case beware you prescribe no Medicines that may check Expectoration, or weaken the cutaneous Discharges; and when Nature favours this Method, it is pernicious to think of purging Medicines, for it would be like Forces acting

acting in contrary Directions, in order to move a considerable Quantity of Matter: In short, between the Purge working downwards, and Nature moving upwards, the Patient must of Necessity fall in the Conflict.

WITH the following Medicines, when the Cough, Pain of the Side, and Shortness of Breath have been severest, and in the last Degree racking, I have given Relief to the Patient.

R. Ol. Lin. 3vj. Aq. Latt. 3j. Aq. Theriac. 3fl. Camphor. gr. viij. Syr. Papav. Erratic. 3vj. m. f. Haust. statim sumendus, & repet. quarta quaque hora.

R. Aq. Cerasor. Nig. 3vj. Aq. Theriac. 3iiij. Sp. Salis Armon. gutt. xl. Marg. præp. 3jfl. Sacch. 3iiij. m. Julap. Cap. coch. iv. in languor.

R. Decocc. Pectoral. 1fl. Aq. Limon. Magistral. 3iiij. Syr. Balsam. 3j. Sp. Salis Armon. gut. xl. m. Bibat copiose ad libitum parum calidè.

I ORDER'D the following Mixture to be externally apply'd to his Side every three or four Hours while his Pain was very vehement, which, as he told me the next Morning, mightily reliev'd him.

R. Ol. Rosar. Ol. Terebinth. a 3j. Sp. Salis Armoniac. 3vj. m. f. Linimentum parti dolenti applicandum, superimponendo Pannum Wallicum parum calidè.

BUT it sometimes happens, in Pleuritic Fevers, that a Solution of the Disease cannot be compass'd by expectorating Medicines, nor those that favour a Discharge by the cutaneous Emunctories,

THIS Case generally happens to those that have pass'd their Childhood, and is what we call the

the *Pleuritis Descendens*, from its being lodg'd lower than the former, tending more to the Bastard Ribs and Diaphragm.

IN this Case, if after the third Day a laudable Expectoration does not appear, and what is spit up continues little and thin, then the Patient will die on the ninth, eleventh, or thirteenth, unless he is reliev'd by the following Administrations.

Applicantur Cucurbitulae utrisque Scapulis, cum Scarificatione, & detrabatur Sanguinis ʒx.

Applicant. Emplast. Epispastic. amplum & acre, inter Scapulas, etiamque ij. interna Brachia quamprimum.

*R. Man. opt. ʒj. dissolv. in Decoc. Pectoral.
ʒiiij. cui adde Pulp. Cassiae ʒvj. Ol. Amygd.
Dulc. ʒ. Sal. Prunell. ʒj. m. f. Hauſt.
statim sumendus.*

BUT if he loaths this, then let him take the following.

*R. Mann. dissol. in Aq. Hord. ʒj. Syr. Rosar.
Dam. ʒvj. m. f. Hauſt.*

AND, if the Intenseness of the Fever abates not, draw ten Ounces of Blood from the Jugular Vein, apply two more Blisters to the Wrists, always rememb'ring to apply a *Stimulus*, to keep up the Motion of the Solids, when they sink beneath their just Balance, which they always do both in the Nervose and severer Pleuritic Fevers.

REPEAT the Purging Medicines every Day, or every other Day, as Occasion requires, and, after the Operation, let the following Draught be given.

*R. Aq. Cerasor. Nigr. ʒi. Aq. Theriac. ʒvj.
Laud. Liquid. gutt. xx. Syr. Croc. ʒ. m. f.
Hauſt. & repet. sexta quaque hora.*

IF, towards the Decline of the Pleurisy, the Straitness of Breath continues, and a tickling

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Cough ensues, there is Danger of a Consumption, if he be not speedily remov'd into the Air; in which Case let him observe a Regimen of Diet, and go on with the following Medicines.

R. Chel. Canc. præp. Oc. Canc. præp. Marg. præp. a 3ij. Croc. Pulv. 3j. Sal. Prunel. 3ß. Sacch. Rosar. 3jß. m. Pulv. in Chart. vj. divid. Capiat unam hora quinta pomeridian. & primo mane superbib. 1bß. Lactis Afini.

R. Sars. 3vj. Chin. Nodos. 3ij. Ering. Cond. 3jß. Sem. Coriand. 3vj. Coq. in Aq. Font. 1bvj. ad 1biiij. Col. bibat pro potu ordinario.

R. Fol. Sen. 3ij. Rhei 3j. Sem. Fænic. Dul. 3jß. Coq. in Aq. Font. 1bß. ad 3ij. Col. cui adde Syr. Ros. Solut. 3j. Aq. Pæon. Comp. 3ij. m. f. Hauft. mane sumendus, & repet. ad tres vices.

BUT all Persons labouring under the Pleurisy escape not so fortunately; for, sometimes, the Inflammation is not to be dispers'd by any Methods that can be taken, but, in spite of all that can be done, it suppurates, and forms an Empyema.

INDEED, it is much to be wish'd, that all Pleurisies could be discuss'd, without coming to Suppuration, it would be both safer for the Patient, and much more to the Honour of the Physician.

ALL Impostumes in the Breast are dangerous, and their Apertion ought not to be undertaken without an unavoidable Necessity, and good Counsel and Adyice ought to precede the Operation.

WHEN Things tend to a Head, we have nothing to do, but facilitate the Suppuration, and discuss the more thin Parts of Matter; to answer which

which Intentions, the following Prescription may be order'd.

- R_o *Bals. Lucatell.* 3j. *Sperm. Ceti* 3ʒ. *Bals. Peru* gutt. vj. *Croc. Pulv.* gr. iiij. m. *fiat*
Bol. sexta quaque hora sumendus, superbib.
Hauſt. Apozem. seq.
- R_o *Decoct. Pectoral. cum Hyſſopo* ℥vj. *Aq. Cin.*
Hord. ℥vj. Syr. Papaver. Erratic. 3j. *m.*
f. Apozem.
- R_o *Sal Volat. Oleof.* Sp. *Lavend.* & Sp. *Corn.*
Cerv. per ſe, a 3j. *m. Cap. gutt. xxx. in*
Hauſt. Vin. Alb. & Aq. Font. ſepius in die.
- R_o *Aq. Lact.* 3j. *Aq. Theriac.* 3ij. *Syr. &*
Mecon. 3vj. Sal. Vol. Ol. gut. xv. m. f.
Hauſt. hora ſomni cujusque noctis ſumen-
dus.

WHEN the Matter is fully ſuppurated, the Impoume muſt be open'd, and, upon this Account, I refer the Patient to the Care of thoſe, whose chief Buſineſſ it is to intend Chirurgical Operations.

FOR my own Part, I muſt confeſſ, I have ſel-dom obſerv'd thoſe Absceſſes to go off kindly, but that, ſooner or later, they terminated in a Phthiſical Conſumption. But if, after the Operation, there remain any Hopes of Escape, it will be highly adiſable, that the Patient go on with the following Medicines, and keep to a Milk Diet, which will both relieve his Cough, reſtore his Conſtitution, and heal the Parts.

- R_o *Fol. Sen.* 3ʒ. *Rhei inciſſ.* 3iiij. *Sars.* 3iiij.
Rad. Rub. Tinct. Hord. Perlat. a 3j. *Sum.*
Hyperic. Sanic. Flor. Rosar. a *Man. j. Raf.*
Ebor. Corn. Cerv. a 3iiij. *Sem. Fænic. Dulc.*
Coriand. Rad. Glycyrr. a 5ij. *Coq. in Aq.*
Font. ℥vj. ad ℥vij. Sub fine coctionis injice
Mel. Virg. 3iiij. m. col. & bibat ℥vj. omni

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mane, hora quarta pomeridian. & hora so-
mni, cum Bol. sequent.

R. Bals. Lucatell. 3ʒ. Oc. Canc. ʒj. Sperm.
Ceti ʒʒ. Balsam. Peru gutt. iiiij. m. Bol.

B U T in the genuine Quinsey, which is an Inflammation of the Uvula, Tonsils, and Muscles of the *Larinx*, besides Bleeding of the Arm, I have observ'd great Relief given from extracting Blood from the *Vena Sublingualis*, under the Tongue; but where the Symptoms are extremely acute, we ought to make Use of more powerful Applications; for in this Case there is great Danger of the Patient's Choaking, from the Inflammation turning to an Apostem.

B U T this Danger may always be prevented, if the following Remedies be but timely apply'd.

F I R S T, after Blood has been, in sufficient Quantities, extracted, both from the Arm and under the Tongue, let a large Blister be applied to the Nape of the Neck, and the following Powders taken every three or four Hours.

R. Crystal. Mineral. 3iʒ. Sacch. Albiss. 3iiij.
Croc. Pulv. ʒj. Cochinel. ʒʒ. Tart. Vitriol.
ʒʒ. m. f. Pulv. in Chart. quatuor dividend.
Capiat unam tertia quaque hora, superbib.
Coch. ʒj. seq.

R. Flor. Rosar. Rub. Man. iʒ. Cortic. Grana-
tor. 3iiij. Coq. in Aq. Fabri Ferratae ʒʒjʒ.
cui adde Mellis Rosar. ʒjʒ. m. Gargarism.
cum quo colluat Os, & Fauces, & Guttur,
sæpius in die, cum Syphone utendum.

B U T, notwithstanding all that can be done, sometimes the Inflammation suppurates, and destroys the Patient, in Opposition to the best Remedies; so dangerous is it, to have a Disease seated in a Part so difficult to come at.

IN this Case, Laryngotomy is the last Refuge the miserable Patient has for his Life, which Operation calls for the Assistance of the Surgeon, to whose Care I must recommend him in this Particular.

C H A P. V.

Of the Cure of Nervose Fevers, or those vulgarly call'd Malignant.

A M now led, by the Order of my Discourse, to intend the Cure of those Fevers that make their Lodgment upon the Brain, and confound those noble Endowments of the Rational Faculties.

THE Variety of these Kinds of Fevers require different Treatment, according as their Symptoms differ, and, especially, according as the *Delirium* (which, more or less, ever accompanies these Fevers) is more or less inclinable to a Phrensy, or Dotage.

I F, in the Begintting of this Fever, the Patient complains of an oppressive Load at his Stomach, with intense Pain of the Head, let the following Vomit be prescrib'd.

R. Aq. Lactis 3j. Aq. Pæon. Comp. 3ij. Rad. Ipecacuan. 3j. Syr. Violar. 3j. m. f. Vomit. statim sumend. superbib. copiose fuscum Avenacei inter vomendum.

ON the second Day, in Case he raves, and is very restless and disturbing, I shall not fear to use the Lancet, and take eight, ten, or twelve Quinces of Blood away. That Operation over, the best Way is to endeavour a Breathing with some of the following Medicines.

T

R. Pulv.

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B. *Pulv. Lapid. Contrayer.* 3*j.* *Croc. Cochinel.*
ā gr. iv. Champbor. *gr. ij. m. f. Pulv.*
Capiat j. sexta quaque hora, superbib. *Coch.*
ijj. Julap. seq.

B. *Aq. Laet. Cerasor. Nigr.* *ā 3jj.* *Aq. Theriac.* *3ij.* *Sal. Vol. Ol. gutt. xl.* *Margarit.*
præp. 3jß. Saccb. Albiss. *3jj.* *m. f. Julap.*

B U T, as a plentiful Breathing is least of all to be expected under this Fever, in Case the Patient be advanc'd to Age, so is it least to be insisted upon, by reason that the Solids are generally over-tense, and do not easily give Way to the Resistance of the Fluids, tho' brought with never such a Force to the Surface of the Skin,

AN D indeed, I must confess, I never could perceive a plentiful Breathing scarce to attend Nervose Fevers; which has been one Means, why I have been a little cautious in administering Sudorificks in any great Quantities.

I H A V E observ'd, Cupping-Glasses apply'd to the Head, to be of singular Service, as also to the Shoulders; and, sometimes, if the Raving encreases, and he casts about, and is very outrageous, I order the *Vena Jugularis* to be open'd, and ten Ounces of Blood to be taken away, which, being nearer the Part affected, makes the Revulsion more suddenly, and gives quicker Relief to the Pressure of the Symptoms.

AN D, to prevent the Solids from sinking, which, towards the Height of the Disease, they most commonly do, and which may be discern'd by the Failure of the Pulse, I generally prescribe a large Blister to be apply'd to the hind Part of the Head, and two to the Arms, and, if Occasion so require, two also may be apply'd to the Wrists, always rememb'reing, that there is great Discretion to be us'd in the timing of those Applications,
that

that are intended as a *Stimulus*, to keep up the Vigour of Nature.

*R. Pulv. de Gut. gr. xv. Pulv. Castor. gr. iv.
Aq. Cerasor. Nigr. ʒij. Aq. Theriac. ʒij. Sp.
Lavend. Comp. gutt. xxx. Syr. Papav. Erratic. ʒvj. m. f. Haust. Cap. quamprimum, &
repet. sexta quaque hora.*

BUT if, notwithstanding these and the like Methods, a plentiful Breathing does not succeed, and that all the Symptoms continue to vex the Patient, about the ninth Day an Effort must be made upon the Bowels, and Endeavours us'd to relieve the Symptoms by Purging.

*R. Tinct. Sacr. ʒij. Syr. de Rbamn. Cathartic.
ʒvj. Elix. Proprietat. ʒij. m. f. Haust. statim sumend. Finita operatione Purgantis,
cap. Medicament. seq.*

*R. Aq. Ceras. Nigr. ʒij. Aq. Cin. Fort. ʒvj.
Syr. è Mecon. ʒij. m. Haust.*

THIS Purging Medicine may be repeated every other Day, till the Height of the Disease is over, in case a plentiful Breathing does not ensue; but, in that Case, Purging is to be avoided: And this I mention here, because in the most desperate Nervous Fever I ever attended, a plentiful Breathing ^{A most desperate} could not be effected, in the Beginning of the ^{Cafe, where} Disease, till the Honourable Dr. Mead being call'd ^{in the purg-} upon, prescrib'd a Purging Medicine, that caus'd ^{ing Method} ^{succeeded.} a plentiful Discharge by Stool, and, upon the Repetition of that Medicine, a laudable Breathing arose all over the Surface of the Body, which, in a few Days, remov'd the threatening Symptoms, and solv'd the Fever.

BUT, not so, must we intend the Cure of Nervous Fevers, when the Patient, from the very Beginning, is struck with a *Stupor*, and the Fever

T 2 evidently

evidently appears to fix upon the Nerves, and seize the Spirits with Sadness and Melancholy.

I N this Case, we must administer all such Medicines as may spur on the Solids, and keep up their Contraction, upon which Account Bleeding is pernicious, and, instead of helping, will increase the Disease.

T H I S is the most dangerous kind of Fever, in which the least Hopes of Life is to be expected, because the Solids are evidently sunk beneath their just Balance, and because their shatter'd Constitution will never be able to bear up under the Intenseness of the Disease.

A s all Evacuations, except that of Sweating, encrease the Symptoms, so ought we, if possible, to intend that; and in this Case, the most powerful Sudorifics and Alexipharmics take Place, which are pernicious, if over-liberally insisted on, in any of the foregoing Fevers.

I N the very Beginning, therefore, let the Patient be convey'd to Bed, and, if he be very restless and uneasy, let the following Prescriptions be exhibited during the first three Days.

R. Theriac. Androm. 3j. Lapid. Contrayer. gr. xij. Sp. Corn. Cerv. per se, gutt. vij. m. f. Bol. Cap. sexta quaque hora superbib. Coch. ij. Julap. seq.

R. Aq. Cerasor. Nig. 3vj. Aq. Epidem. Aq. Paeon. Comp. a 3ij. Marg. præp. 3ij. Sacch. 3ß. Sp. Nit. Dulc. 3j. m. f. Julap. Cap. Coch. ij. sexta quaque hora cum Bol. & in Languor.

Applicetur Emplast. Epispaſtic. amplum & acre Scapulis, & ij. alia Brachiis internis quamprimum.

THESE for the first three Days.

AFTER that Time, if the Patient continues muttering,

muttering, and takes no Sleeps, the following Paragoric Draught may be given.

R. Aq. Ceras. Nig. ʒj. Aq. Theriac. ʒj. Syr. Crocin. ʒvj. Laud. Liquid. Syd. gutt. xx. m. f. Hauſt. cap. hora ſomni cujuſque noctis.

If the Body be coſtive, let Clyſters be frequently injected; and, towards the eighth Day, if a plentiful Breathing does not appear, let the following Draught be added.

R. Vin. Canarin. ʒj. Rhabar. ſubtilis. Pulv. ʒ. Sal. Corn. Cerv. Vol. Sal. Succin. ā gr. iv. Elix. Proprietat. gutt. xxx. m. f. Hauſt. Cap. craſt. mane, ſi Alvus, priuſ, copioſe non dejecierit, & repet. pro re nata.

AFTER the ninth or tenth Day, in this Fever, the Pulse generally begins to fail more and more, and he is feiz'd with Watchings, Tremblings, and Convulsions, which call for the Aſſistance of the moſt powerful Alexipharmicks; in which Caſe, let him take the following.

R. Theriac. Androm. ʒ. Rad. Serpentar. Virg. ʒ. Lapid. Contrayerv. gr. viij. Sal. Volat. Armon. gr. vj. Caſtor. Ruf. gr. iv. cum q. f. Syr. Peon. Comp. m. f. Bol. Cap. 6ta quaque hora, ſuperbib. Coch. iiij. Fulap. seq.

R. Aq. Cerasor. Nig. ʒvj. Aq. Theriac. ʒiiij. Sp. Nit. Dulc. ʒj. Syr. Garioph. ʒj. m. Fulap. Vel,

R. Theriac. Androm. ʒj. Bezoar. Orient. gr. xij. Pulv. Viperar. ʒj. Sal. volat. Succin. gr. viij. Sal. Vol. Viperar. gr. vj. Caſtor. Ruf. gr. iv. Aq. Ceras. Nig. ʒj. Aq. Theriac. ʒij. Syr. Crocin. ʒiiij. m. f. Hauſt. ſexta quaque hora ſumendus. Vel,

R. Rad. Serpentar. Virg. ʒiiij. Rad. Contrayer. ʒj. Contund. ſimul & infund. in Aq. bullient. ʒ. cui adde Cochinel. ʒj. Croc.

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*Ang. Æp. Flor. Anthos 3j. Postea col. cui
adde Aq. Theriac. 3j. S. Tinct. Croci Vino Ca-
narin. fact. 3j. Sp. Lavend. Comp. 3ij. m.
Mixt. Alexipharm. Cap. Coch. ij. secunda
quaque hora.*

*Applic. Emplast. Epispastic. Occipiti, duo alia
internis Carpis, etiam internis femoribus, &
tibiis, si res se pessimè habent.*

BUT if great Heat, a dry Skin, a hard Pulse,
black and dry Tongue, ensue towards the Height
of the Disease, without Sweating, we must have
Recourse to Purging Medicines, and then the
whole Stress of the Cure must depend upon the
Issue of their Operation.

*R. Decocct. Sen. cum Flor. Anthos 3j. S. 3ij. cui
adde Syr. è Flor. Perfic. 3vj. de Spin. Cervin.
3ij. Aq. Pæon. Comp. 3ij. m. f. Hauft.
& repet. pro re nata.*

IF the Patient recovers, which is known by
the daily abating of all the Symptoms, after the
Crisis is over, there generally remains a Stupor up-
on all the Senses, if he escapes so; for I have
known some that have lost their Memory, others
that have continu'd distracted ever after, and ma-
ny that have fallen into Wastes, Decays, and Con-
sumptions, or other Chronic Diseases, to which
they were most inclinable. To prevent which Con-
sequences, let him be convey'd into the Air, and
drink the Ass's Milk, and take such other Medi-
cines, as may be most fitting to restore his shat-
ter'd Constitution.



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A NEW
THEORY
 OF
PHYSICK
 AND
DISEASES.

PART VI.

Of the Cure of Chronic Diseases.

Introduction.



E have now finish'd the Cure of those Acute Diseases, whose Nature and Cause we consider'd in the former Parts, and which arise from the Contraction of the Solids, elevated above the Balance of Nature.

THE Order of my Discourse requires, that I now go on to enquire into the Cure of those Chronic Illnesses, that proceed from the Con-

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traction of the same Instruments of Health and Diseases, depress'd beneath their natural Balance.

THESE Diseases have no determin'd Crisis, to discover their Height and Decline, as we observe in most Acute Diseases, nor do they attack the Constitution with that Violence perceptible in the first Onset of most of the others; but generally they insensibly approach us, and for the most part take Possession of the Constitution, before we apprehend the Danger.

AND as they, at first, give us but little Trouble, and are not very uneasy, so we suffer them to go on and gain Ground, till, at last, they rivet themselves to the Constitution, and make such Depredations upon both the Solids and Fluids, as are not easily to be remov'd; then, too late, we send for the Physician, and expect he should do Miracles; and if one single Prescription does not answer the Purpose, we are weary of taking the Slops, and at once reject both the Physician and his Remedies.

So that I do not wonder to hear of so many Complaints of incurable Diseases, when I consider the Treatment that most Gentlemen of the Faculty meet with from the unsetl'd and precarious Tempers of their Patients.

IT cannot be expected, that the Physician should cure the Disease with a Look or Glance; or that the feeling his Pulse, and inspecting his Urine, will remove the Evil he labours under.

WE may observe the Course of the ancient Method, quite the Reverse of this Practice; scarce a Cure of any considerable Distemper, but what oblig'd the Patient to continue his Rules and Medicines a considerable Time, sometimes six Months, sometimes longer, and many times whole Years.

AND

AND those Restraints of Nature they thought better to submit to, than carry about them a Disease, that made even Life itself a Burthen.

PHYSICIANS, in those Ages, were most happy, that had the Diseases of such a tractable People to cure, who thought no Regimen too difficult, no Course too long, in order to the restoring a good State of Health.

AND I am the less surpriz'd, when, in their Works, I often perceive Cures, that would pass for Miracles in our Age. Besides, if we suppose a Distemper, by Length of Time and evil Customs, interwoven with the Constitution, how can we think it possible to remove the Malady, without enjoining the Patient a Course of Medicine, that, in some Measure, may equal the Length of Time it has been generating; from which we may expect a happy Change, and, by this only Method, retrieve a weakly, sick, meagre Habit of Body, to a brisk, lively, active, and strong Constitution, and, without which Manner of proceeding, it will be impossible to give any considerable Turn to those Chronic Diseases, that have been of any long standing.

CHAP. I.

Of the Cure of Costiveness.



O STIVENESS is among the first of those Chronic Indispositions, whose Cure I shall intend, and, if not a Disease, yet, certainly, both a Cause and Symptom, very disturbing to Nature.

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IT is an Affection so easy of Cure, if timely taken, that I should scarce think it worth my Notice, were it not, that, if suffer'd to continue, it never fails to lay the Foundation of future Illnesses.

IT proceeds from the Viscidity of the Bile, and Slowness of its Secretion, arising from the Contraction of the Solids, depress'd beneath their natural Balance: Therefore, the properest Method of Cure will be, by elevating the Contraction of the Solids, and encreasing the Secretion of the Bile, whereupon the Peristaltic Motion of the Intestines may be excited to make suitable Impressions upon the contain'd Juices, in order to the better dividing, attenuating, and fitting them for due Expulsion.

THE Air, Diet, Exercise, and the Government of the Passions, have the greatest Influence in the Cure of most Chronic Diseases, without whose Regulation, we shall be able to make but a very inconsiderable Progress in the slightest Indispositions.

LET his Diet, therefore, be thin, spare, and softening, his Exercise gentle Riding. Once or twice a Week he may drink the *Epsom* or *Stretham* Waters, with or without Manna. Water-Gruel in a Morning, new Milk from the Cow, or those Meats that lay the least Stress upon the Solids, will be found of greatest Benefit during Costiveness.

TO soften and relax the *Faces* of the Bowels, and give the Patient present Relief, the following Prescription will be of singular Service.

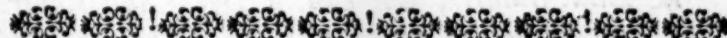
R. Decoct. Com. pro Enem. ʒx. Mel. Violar. ʒiv. Ol. Amygd. Dul. ʒiiij. Sal. Prunel. ʒij. m. f. Enem. statim injiciendum.

R_o Cassiæ noviter extract_t. 3ij. Syr. Violar. 3j_s.
Tartar. Vitriol. 3j. m. f. Elect. Cap. Quantitat.
Nuc. Jugland. mane, bis terv_e hebdomade,
superbib. 1b_s. seq.

R_o Aq. Malv. 1b_ij. Syr. Viol. Alth. a 3ij. Sp.
Nit. Dulc. 3ij. m. Vel,

R_o Man. opt. 3i_s. diff. in Aq. Epsom. 3iv. cui
adde Ol. Amygd. Dulc. 3j. ut fiat Hauſt.
propinand. bis terv_e in septimana.

THESE are all the Medicines I ever think proper to prescribe in a simple Costiveness, when no other Illness attends, and which I generally find to succeed, especially if proper Exercise be join'd with them.



C H A P. II.

Of the Cure of the Cholic, and Cholic Pains.



N all Chronic Diseases, there are certain Periods of Time, wherein Nature endeavours to dislodge her Enemy; and those I call the Fits or Paroxysms, which are more or less frequent, as the Patient is more or less regular in the Course of the Non-naturals.

I N the Cure of the Cholic, the same Indications serve not to appease the Symptoms, and cure the Disease; and therefore, when the Physician is call'd, during the Paroxysm, he must employ his first Endeavours how to asswage the Pains, and, if an obstinate Costiveness attend, I am of Opinion, that a softening, oily Clyster may be properst to precede all other Intentions, because it relaxes

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relaxes the Intestines, and renders their Contractions more pliable, whereupon the Descent of the Excrements is greatly promoted.

Rx Decoct. Com. pro Enemat. 3x. *Mel. Mercurialis.* 3ij. *Ol. Lin.* 3vj. *m. Enema.* *Vel,*
Rx Flor. Chamæmel. Man. ij. Sem. Anis. Fænic. *Dulc.* a 3jß. *Coq. in Seri Latt.* 1bß. *Col.*
cui adde Ol. Lin. 1bß. *m. Enema.* *Vel,*
Rx Decoct. Com. pro Enemat. 3xij. *Mel. Violar.*
3ij. Eleet. de Bacc. Laur. 3vj. *Terebinth.*
Venet. in Vitel. *Ovi diff.* 3vj. *Ol. de Baco.*
Juniperi 3jß. *m. Enema.*

If the Pains continue, let the Clyster be repeated, and the following Medicine will go near to remove the Fit.

Rx Elix. Salutis, *Ol. Lin.* a 3jß. *Syr. Rosar.*
vel de Spin. Cervin. 3vj. *m. f. Haust.* *statim sumendus.*

But if the Pains arise from windy Excrements, over-long retain'd in the Bowels, I know nothing will more speedily relieve the Oppression, than the following.

Rx Fol. Sen. 3vj. *Rad. Glycir.* 3jß. *Sem. Anis.*
Fænic. *Dulc.* a 3j. *Sal Tart.* 3ß. *Coq. in*
Aq. Epsom. 1bj. *ad* 3xij. *cui adde Ol. Amygd.* *Dulc.* 3ij. *m. divid.* *in tres Haust.*
Capiat j. tertia vel quarta quaque hora,
donec Alvis copiose responderit.

In very severe Cholic Pains, I have known the following Medicine of very great Service.

Rx Pillul. Ruffi 3ß. *Pillul. Matth.* gr. viij.
Ol. Carui gutt. ij. *m. f. Pillul.*

But in the Nervose Cholic, when the Disease is in the last Degree racking, I have known great Relief given from the following Medicines.

Fiat Venæsectio in Brachio, & mittetur Sanguinis 3x.

R Calomel. gr. xij. Conserv. Rosar. q. f. m.
Pil. Cap. quamprimum superbibend. Haust.
seq.

R Pillul. ex Duobus 3j. dissol. in Aq. Epidem.
3j. Aq. Cerasor. Nig. 3j. cui adde Laud.
Lond. gr. iij. m. Haust.

THESE Medicines are employ'd in clearing the first Passages, which seldom fail of solving the Cholic Fit, unless it turn to the Iliac Passion, which then calls for the most powerful Remedies; for the greater the Obstructions, the more forcible the Medicines must be, if we ever expect to overcome the Disease.

THEREFORE, in the Iliac Passion, which is the highest Degree of Cholic Pains, I have known great Relief to ensue upon the Administration of the following Medicines.

R Decocc. Com. pro Enem. 3x. Elett. de Bacc.
Laur. 3j. Infus. Croc. Metall. 3vj. m. f.
Enema quamprimum injiciendum.

IF the Vomiting continue cruelly to vex the Patient, after the Return of this Clyster, let the following Bolus and Draught immediately be taken.

R Calomel. 3j. Conserv. Malv. q. f. m. Bol.
statim sumend. superbib. Haust. seq.
R Pill. ex Duobus gr. xxv. vel 3j. Diff. in
Elix. Salut. 3j. cui adde Laud. Lond. gr. iij.
Aq. Cerasor. Nig. 3vj. m. f. Haust.

UNLESS it proceeds from a *Sphacelus*, in which Case it is ever mortal, these Medicines, I believe, will most certainly relieve it.

WHEN the Cholic Pains are got clear off, our next Enquiry is, how we may best prevent their Return; and that will be best effected by such Medicines as restore the Tone and Vigour of the Stomach and Intestines, by raising their Contractile Powers to their just Standard.

A New THEORT of

If the Patient, therefore, is desirous of enduring no more of his Anguish, in the first Place he must submit to a proper Regulation of the Non-naturals: This Conjunction of Air, Diet, Exercise, and Medicines, or joining together of proper Helps, is the only Means that can give him any Relief; and the best Medicines in the World will signify not a Rush, if he is resolv'd to sit still, and hear his Physician prate, without following his Directions.

If he would obtain an entire Freedom from the Cholic, he must strictly adhere to the following Rules.

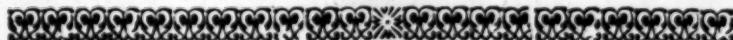
F I R S T. To be regular in his Diet, with Regard to both Meats and Drinks, and, to avoid those things he knows is certain to give him a Cholic Fit. In the next Place, let his Exercise suit with the right Temperature of his Body; let his Sleeps be moderate, and his Passions calm; and, above all, be careful that the Evacuations answer, especially those by Stool; and, if Costiveness attend, let oily, laxative Glysters, be frequently injected; and once a Week he may take an Ounce of *Cassia*, to keep the Body soluble; and then, to restore the several Digestions, let him go on with the following Prescription.

R. Sum. *Absinth.* *Rom.* *Man.* $\beta.$ *Flor.* *Chame-*
mel. *Pug.* $j.$ *Rad.* *Gentian.* $zj.$ *Sem.* *Coriand.*
Cardam. *Minor.* \bar{a} $zj.$ *Coq.* *in Aq.* *Font.* $ffj.$
ad $\tilde{x}ij.$ *Col.* *cui adde Aq.* *Absinth.* *Maj.*
Comp. $\tilde{z}ij.$ *Vin.* *Chalyb.* *vet.* $\tilde{z}ij.$ *m.* *Infus.*
Cap. *Coch.* $vj.$ *omni mane, hora quarta pome-*
rid. $\&$ *hora somni, cum Elekt.* *seq.*

R. *Conserw.* *Absinth.* *Rom.* $\tilde{z}j\beta.$ *Pulv.* *Rad.*
Zedoar. $zij.$ *Bals.* *Peru* $\tilde{z}j\beta.$ *Coral.* *Rub.*
præp. *Oc.* *Canc.* *præp.* \bar{a} $zj\beta$ *Chalybs sim-*
pliciter præp. $zj.$ *cum q. f.* *Syr.* *ex Flor.*
Perfitor.

*Perfcor. m. Electuar. Cap. quantit. Nuc.
Mosch. pro Dosi.*

If these Instructions and Administrations be but punctually attended to, he need not fear any Returns of his Cholic Pains.



C H A P. III.

Of the Cure of Intermittent Fevers and Agues.



INTERMITTENT Fevers and Agues are the first Chronic Diseases, that attack the vascular System, after the Solids are sunk beneath their natural Standard; and, if, in every Paroxysm of these Periodical Diseases, the immediate Cause were not removed, the Fever would be continual, and, if the remote Cause did not remain, the Fits could not return.

THEREFORE, in the Cure, we must pay a just Difference, to the several Indications, and make a Distinction betwixt the Medicines that abate the Symptoms, or take off the Fits, from those that cure the Disease.

THE Cure of the Fits, consists chiefly, in supporting the Spirits, increasing the cuticular Discharges, and allaying the Symptoms, if any very violent arise, all which Intentions are admirably well answer'd, by gentle Sudorifics, tho', for the most part, I suffer the first Fit to go off of its own Accord, and use my Endeavours to prevent its Return: However, as something must be done in the Fit, or at least, appear to be done, I generally prescribe the following Method, which seldom fails to relieve the Symptoms.

℞ Pulv.

A New THEORY of

R *Pulv.* è *Cbel.* *Canc.* *Comp.* 3j. *Croc.* gr. iv.

m. f. Pulv. *Capiat* j. *sexta quaque hora, in*
Paroxysm. *superbib.* *Coch.* iij. *Julap.* seq.

R *Aq.* *Cerasor.* *Nigr.* 3vj. *Aq.* *Theriac.* 3ij.

Marg. *præp.* 3j. *Sal Vol.* *Ol. gutt.* xl. *Sacch.*
Albif. 3ij. *m. f. Haust.*

A T Night, I always take Care to secure the Tranquility of the Spirits by a gentle Anodine.

R *Aq.* *Cerasor.* *Nig.* 3j. * *Aq.* *Pæon.* *Comp.*

3vj. *Syr.* è *Mecon.* 3j. *m. f. Haust.*

As soon as the Symptoms abate, and the first Fit is over, we must deliberate upon the proper-est Methods to prevent its Return; and tho' the Jesuit's Bark be reputed the most certain Specific, yet the World ought to know, that it is not always so certain, but that other Remedies may be given with equal Success.

W I T H the following I have cur'd several, both Agues and Fevers, and, thro' the whole Cure, never prescrib'd one Grain of the Bark.

I F the Constitution will bear it, I always pre-scribe the following Vomit.

R *Rad.* *Ipecacuan.* 3j. *Oximel.* *Scilitic.* 3j.

Aq. *Cardui* 3j. *Syr.* *Violar.* 3j; *m. f. Potio*
Emetic.

A F T E R Vomiting, if the Stomach be very much disorder'd, and seem not readily to settle, exhibit the following Anodine Draught, which will greatly appease its Tumults.

R *Aq.* *Lact.* 3j. *Aq.* *Ceras.* *Nigr.* 3j. *Cin.*

Hord. 3ij. *Aq.* *Theriac.* 3j. *Syr.* è *Mecon.*

3vj. *Laud.* *Liquid.* *gut.* x. *Sal.* *Absinth.* 3j.
m. f. Haust.

R *Aq.* *Menth.* 3j. *Aq.* *Theriac.* 3vj. *Sp.* *Vitriol.*

gut. xx. *Sal.* *Absinth.* 3ij. *m. f. Haust.*

Febrifug. *Cap.* *quatuor horas post discessum*
Paroxysmi.

R *Flor.*

*B. Flor. Chamæmel. Man. j. superfund. Aq.
Font. ferrefact. ℥ij. per horas sex, cui ad-
de Aq. Tberiac. ℥ij. Syr. Limon. ℥ij. Sp.
Vitriol. gutt. xx. m. Cap. Coch. vj. quarta
quaque hora extra Paroxysm.*

THIS Draught and Infusion obtain a great Power in raising the over-lax'd State of the Solids, and giving them a due Tensity, whereby the Violence of the ensuing Fits greatly abate, and entirely go off, after the Patient has twice or thrice taken these Medicines ; and, in Mrs. Jemison's Case, which was an Ague of long standing, they put by the Fits, after she had taken Pounds of the Bark to no Purpose.

NOTE that I say this, to lessen the high Esteem of the Bark ; it is a Medicine that, in all Quotidians, Tertiaries, Semitertiaries, and Quartaries, is second to none, if well tim'd, and join'd with proper assisting Medicines : nor do I scarce know of any periodical Disease, but what will yield to its Influence, if discreetly prescrib'd ; and, in continual Fevers, with large Remissions, I have known the Bark very efficacious. But as its Influence is most conspicuous in removing all Agues and Intermittent Fevers, so, in prosecuting a successful Cure, we should be highly careful to examine what Parts are most distracted, from the raging of the Symptoms ; for, in those Parts, we shall find the Violence of the Disease to be chiefly seated.

If the Fever press most upon the Stomach, the Fits generally go off with Vomiting : In which Case, after a gentle Vomit, the following Prescription will cure the Disease.

*B. Cortic. Peruv. ℥. Sal. Absinth. ʒj. Aq.
Ceras. Nig. ℥j. Tberiac. ℥. Syr. Garioph.
zijj. m. f. Haust. Capiat j. quarta quaque
hora extra Paroxysmo. Bibat Vini Absinth.
U cyathum*

A New THEORY of

*cyathum tempore paſsus, cum Aq. Font. pa-
rum dilut.*

IN Cases where the Fever lies in the Head, and excites intolerable Head-achs, the following will give great Relief.

R. *Cortic. Peruv. 3ij. Caſtor. Rus. Sal. Vol.*
Succin. a gr. vj. Pulv. de Gutt. 3fl. cum q.
j. Syr. Paeon. Comp. m. f. Bol. Cap.j. quar-
ta quaque hora extra Paroxysmo, superbib.
Coch. iiij. Julap. seq.

R. *Aq. Ceras. Nig. 3vj. Paeon. Comp. Bryon.*
Comp. a 3j. Syr. Paeon. Comp. 3j. Spirit.
Lavend. Comp. 3j. m. f. Julap.

IN all Inflammatory Diseases, we must avoid the Bark, as we would the Plague; as in the Pleurisy, Peripneumony, Quinsy, &c. And tho' the Remissions are large, yet I have known the Danger very great from its Administration.

To those that cannot take it in Substance, it may be given in Infusion, after the following Manner.

R. *Cort. Peruv. Contus. 3j. Rad. Serpent. Virg.*
vel Contrayer. contus. 3ij. Flor. Chamæmel.
Man. j. Coq. in Aq. Font. 1bj. ad 1bj. sub
fine coctionis injice Sal. Tart. 3j. Col. cui
adde Aq. Absinth. Maj. Comp. 3iv. m. Cap.
Coch. vj. tertia quaque hora extra Paroxysmo.

BUT the Patient should be exhorted not to leave off the Use of the Bark too soon, for Fear of a Relapse; for the Fits are apt to return upon any great Occasion that may relax the Vessels again; to prevent which, I always advise the Patient to take half an Ounce of the Bark about nine or ten Days after the Fits have entirely left him, which never fails to compleat a perfect Cure.

C H A P. V.

*Of the Cure of slow Fevers, attended with
Hectic Heats.*

IN the Cure of this Fever, which may be the Effect of any Cause, that can weaken the Spring, and impair the Action of the Solids, we must be very careful of rightly regulating the Non-naturals, especially the Air, Diet, and Exercise, upon which three Points the grand Indications of Cure will chiefly turn; nor is it possible to prevent this Fever from falling into a Hectic, if those three Intentions are not exactly suited to the Exigencies of the Disease.

IN the first Place therefore, after he has made Choice of a fine, clear, agreeable Air, let him intend the Nature of his Diet; light Meats, and such as, in their Digestion, lay the least Stress upon the Solids, are best for Use; upon this Account I should prefer the Ass's Milk before any other, though, in some other Chronic Diseases, much might be said in Defence of the Milk of a good sound Cow, and if he encline to a Milk-Diet, he may drink the Cow's Milk with Barley Water, equal Parts of each, for his constant Drink, and as great Quantities as he pleases, so he does not overcharge his Stomach; for those thin, softening Liquors greatly attenuate the stagnant Juices, and give Nature Time to open the Obstructions, whereby they very much asswage

U 2 those

A New THEORY of

those intense Heats, that, more or less, never cease to vex those that labour under this Fever.

G E N T L E Riding is the best of Exercises, which he must be intent upon, and not think that two or three Jaunts will serve his Turn, but every Day he must intend his Horse, more or less, and ride little Stages, and those in no greater Paces, than as he finds himself refresh'd by 'em.

I N the Cure of this Fever, we must be very careful to use no violent Methods, and therefore both Vomiting, Bleeding, and the severer Purges are entirely to be laid aside in the Progress of the Disease, and but very sparingly, if at all us'd, in the Beginning.

I F, during the Continuance of this Disease, the Body be constive, as generally it is, those Evacuations that move by Stool are the most proper, and best suit the Exigence of the Symptoms; and indeed, to prevent those Erratic Fevers from lapsing into a Hectic, or Pthisical Consumption, will require all the Discretion, Care, and Judgment, as well in the Patient to obey, as the Physician to prescribe proper Rules; and, after all, it is but very rare we see Escapes made, and the Patient entirely rescued from the Tyranny of this threatening Disease, and that only, when he has join'd all his Resolutions to obey, with indefatigable Industry, the Directions of his Physician.

I F the Solids are greatly impair'd, which they seldom fail to be, when the Disease has taken any Hold of the Patient, let him go on with the following Method, which will mightily contribute to the restoring his Strength and Vigour.

*R_x Pulv. Bezoard. Comp. in fine bujus libri
prescript. 3ij. Rhabarb. Pulv. gr. xv. Con-
fect. Fracastor. fine Melle 3ij. Ol. Cinam.
gutt. j. m. f. Bol. Cap. bora somni bis in
septimana.* *R_x Pulv.*

R. *Pulv. Bezoard. Comp. Sacch. Rosar.* a 3*fl.*
*Cochinel. 3*fl.* m. f. Pulv. Cap. primo mane*
*& quinta pomeridian. superbib. 1*fl.* Lactis*
Afini.

R. *Sarsaparil. 3*iv.* Chyn. Nodos. 3*ij.* Rad.*
*Ering. Cond. 3*ij.* Coq. in Aq. Font. 1*fl.* vj.*
*ad 1*fl.* Col. cui adde Sp. Nit. Dulc. 3*ij.**
*m. bibat 1*fl.* pro potu ordinario.*

N o w as the Sleeps, in such Cafes, are generally disturb'd and unsound, so I always take Care to secure their Tranquility by a gentle Opiate; and therefore, those Nights he does not take the Opening Bolus, let him take the following.

R. *Confett. Fracastor. sine Melle 3*ij.* Ol. Cin.*
*gutt. j. Pulv. Bezoard. Comp. 3*j.* Laud.*
Liquid. gutt. xij. m. f. Bol. hora somni su-
mend. superbib. Hauft. seq.

R. *Aq. Font. 3*ij.* Aq. Paeon. Comp. 3*fl.* Syr.*
*& Mecon. 3*fl.* m. f. Hauft.*

I F, by Use and Custom, he has so habituated himself to Tea, as not to be able to support himself without it, let him indulge himself every Morning with two or three Dishes after the following Manner.

T A K E the Yolk of a new-laid Egg, and beat it up very well with three or four Spoonfuls of Cream, to which add three Drops of Oil of Cinnamon. This is a most Sovereign Balsam, and one or two Tea-Spoonfuls in every Dish of Tea, will render it the most restorative of any thing in the World. I drank this Mixture in Tea myself, about three Years ago, and found great Relief, notwithstanding I then was attended with all the Symptoms of an inward Decay.

I F the Remissions widen, and the Fits, which always attend slow Fevers, go off, then we may try the Bark. But, in the Beginning, I should

U 3 prefer

prefer it in Infusion, rather than Substance, because it will in such Weaknesses sit lighter upon the Stomach, and digest better.

*R. Cort. Peruv. contus. 3j. Cochinel. Pulv. 3j.
Coq. in Aq. Font. libj. ad 3xij. Col. cui
adde Aq. Cin. Fort. 3iv. Elixir. Vitriol.
gutt. xl. m. Cap. Coch. vj. quarta quaque
hora, extra Paroxysmo.*

A N D, as he gains Strength, he may change this Course for the Bark in Substance, ever taking Care to join such assisting Medicines, as may help it off the Stomach; for in some Cachectical Constitutions it is apt to pall the Stomach, and lessen the Appetite.



C H A P. VI.

Of the Cure of the Scurvey.



HE Scurvey is an Indisposition that lays the Foundation of most Chronic Diseases, and might as easily be cur'd, if taken in the Beginning, as any that affects the Body; but the Misfortune is, that few People so far consider their own Interest, as to take Advice before it has made too great Ravages upon the Constitution.

To this Neglect are owing all those severe Chronic Diseases, that, at this Time, so much pester Mankind, the Gravel, the Gout, the Stone, the Asthma, the Dropsy, and Consumption, being those fatal Stages it never fails to terminate in, when not timely reliev'd.

WE

WE shall consider the Cure of that attended with the mildest Symptoms first, and so proceed on to those that make the greatest Depredations upon both the Solids and Fluids.

IN the Beginning, if a *Nausea*, Load, and Want of Appetite affect the Stomach, let a Vomit be exhibited in the first Place.

IN Plethoric Constitutions, it seems absolutely necessary; and without the Operation of a Vomit, in some Cases, and that repeated, I see not how any considerable Turn can be given to this Disease.

Bo. *Tart. Emetic.* gr. *vij.* *Conserv. Lujul.* *ij.*
m. f. Bol. Cap. quarta pomerid. superbib. co-
piosa Infusion. *Cardui Benedict.*

BUT if any great Weakness attend the Constitution, and Indications arise that may forbid the Use of a Vomit, then we must omit that Operation, and endeavour to answer the End of evacuating Medicines by the following purging Potion.

Bo. *Tinct. Sacr. zijß.* *Syr. de Spin. Cervin.* *zvj.*
Aq. Paeon. Comp. ziji. *m. f. Haust. Cap.*
mane tertia vel quarta quaque die per tres
vices cum debito regimine.

AS the Cohesions of the Blood in this Case are the least, so simple, easy Medicines will best remove 'em; small Quantities of the Steel, join'd with Aromaticks, in Conjunction with Bitters, will answer the End much better, than a pompous Shew of doing a great deal more than really is necessary, much of which is nothing to the Purpose; for as the Physician is Nature's Handmaid, so is he only to help, not direct her; and when the Solids are beneath their natural Balance, he is to assist her, to bring 'em within their proper Sphere of Action; and he is the only capable Person to judge how much they are depress'd, and what Force must be employ'd

in reducing them again to their proper Standard ; and this he may easily learn from the impending Symptoms, the Complaint of the Patient, and the Appearance of Things, as they are carry'd on in the Body. Therefore let him observe the following Prescription those Days he omits taking his purging Medicine ; and as the Stomach is the first Bowel generally that suffers under the Scurvey, so great Regard must be paid to those Medicines that may best help its Digestion.

*R. Summitat. Abrotonij 3j. Absinth. Rom. 3ij.
Sem. Cardamom. Coriand. a 3j. Rad. Gen-
tian. 3j. Coq. in Aq. Font. 1lbj. ad 3xij. Col.
cui adde Aq. Raphan. Comp. 3iv. m. Infus.
Cap. Cock. vj. boris quatuor medicinalibus
cum Quantitat. Nuc. Mosch. Electuar. seq.*

*R. Conserv. Absinth. Rom. 3j. Flavid. Aurant.
3vj. Pulv. Bezoard. Comp. 3iij. Ari Comp.
3j. Spec. Diamb. sine Od. 3j. Croc. Mart.
in fine bujus libri præscript. 3j. cum q. s.
Syr. Papaver. Erratic. m. Elett.*

THIS Method of treating the Patient I find always to answer in the Beginning of the Scurvey, while the Disease is recent, and the Symptoms not complicated.

BUT when it has been of any considerable standing, and the Solids are greatly impair'd, I find it necessary to employ more considerable Medicines and join greater Forces, in order to overcome the Stubbornness of the scorbutic Taint.

WHEN the Disease comes to this Height, generally scorbutic Spots and Blotches emboss the Legs, Arms, and Thighs, and appear, in some, diffus'd in diverse Parts of the Body. In such Cases, attended with these Circumstances, I prescribe generally the following Medicines,

R. Calomel.

Rx Calomel. 3ij. Conf. Rosar. q. s. m. Bol. Cap.
 hora somni.
 Rx Fol. Sen. zj. Rhei incis. 3j. Rad. Glycir.
 3j. Sal. Tart. 3j. Coq. in Aq. Font. tbs. ad
 ziv. Col. cui adde Syr. de Rbam. Cathartic.
 3vj. m. f. Potio, crastina mane sumend.
 Rx Conf. Anthos 3j. Cochlear. Hort. 3vj. Croc.
 Martis in fine libri præscript. 3j. Rad.
 Rhaphan. 3ij. Flor. Sulph. 3ij. Specier. A-
 romatic. Rosat. 3j. cum q. s. Syr. Papaver.
 Erratic. m. Elect. Capiat Quantitat. Nuc.
 Mosch. mane hora quarta pomerid. & hora
 somni, superbib. Coch. vj. Julap. seq.
 Rx Aq. Ceras. Nig. tbs. Aq. Pæon. Comp. Rha-
 phan. Comp. a ziv. Syr. de quinq. Radic.
 3j. Spir. Nitr. Dulc. 3j. m. f. Julap.

BUT, in the more severe State of the Scurvey,
 the Attractions of the Fluids strongly inclining
 to each other, form those Concretions and Swell-
 ings about the Gums, which often turn cancerose,
 and rot and spoil the Gums, upon which the
 Teeth grow loose for Want of proper Fastening,
 and often decay and fall out, till at last the whole
 Set is dislodg'd.

AND tho' this State of the Scurvey, from the
 attending Symptoms, is greatly difficult to cure,
 yet possible to cure, if the Patient would but be
 indefatigable in his Attachment to Rules and Diet;
 and tho' we see but few cur'd of this highest and
 last State of the Scurvey, that is owing to the
 few Patients we find willing to submit to the Di-
 scipline necessary for a thorough Cure, and which
 might certainly be effected, if Men would but
 abandon those Vices that brought on the Malady;
 but they seldom will hear of any Regimen that
 balks Appetite, and therefore do they suffer the
 Disease to go on, till it settles in the Dropsy, or

some

some other Disease, as equally dangerous, and which seldom leaves him, till it put an End to his Life and Malady together; for it requires an *Herculean Labour* to unrivet a Disease, that, it may be, has been many Years a forming, and which therefore cannot be expected to give Way, without a Proces in Medicine, answerable, in some measure, to the Length of Time it has been generating. However, I shall beg leave to propose a Prescription I have known to do great Service in the highest Degree of the Scurvey.

R. Flor. Sulph. Croc. Martis, Theriac. Lond.
ā ʒj. Syr. ē Mecon. ʒij. m. Cap. quantitat.
Nucis Moschat. boris tribus medicinalibus,
superbib. Coch. vj. Julap. seq.
R. Aq. Cochlear. ʒvij. Aq. Raphan. ʒiv. Syr.
Balsam. ʒj. m. Julap.

THESE Medicines he took three Months, observ'd a Milk Diet, and drunk nothing but Milk and Water for his constant Drink during all that Time, purg'd with Calomel between Whiles, and was well, and continues to this Day free from any of those Defedations he was over-run with. I order'd him the following Powder for his Gums and Teeth, which were extremely rotten and swell'd.

R. Gum. Myrrb. Bol. Veri, Nicotian. Uſt. ā
ʒj. Sal. Tart. ʒj. m. Pulv. Dentifric. Gin-
givis applicandum.

C H A P. VII.

Of the Cure of Schirrose Tumours.

CHIRROSE Tumours are a Branch of the Scurvey, but, by reason of their Situation, require a different Method of Cure. They are hard, indurated Swellings, affecting the Stomach, Intestines, Lungs, Kidneys, and Bladder ; but chiefly the Liver and Spleen are their Seat, and the Bowels they principally affect, and whose Cure in this Chapter we shall most of all intend.

THEY tread softly in the Beginning, and give little Disturbance to the Patient, which is one Reason why Advice is scarce ever demanded till the Tumours are inveterate, and past all Hopes of Recovery.

WHILE they are recent, and not attended with the Jaundice and Dropsy, they may admit of Cure; but when once those Diseases rise upon them, the fatal Period is fix'd, beyond which there is no Redemption.

THEY proceed generally from a too languid Contraction of the Solids, whereupon the Fluids go into too close Contacts, and form indurate Tumours or Tuberles in different Parts of the Body.

THE Way, therefore, to cure 'em is to endeavour to raise the Contraction of the Solids, disperse the preternatural Cohesions of the Juices, and prevent their returning into too close Contacts for the future; all which Intentions are best answer'd by the following Medicines.

R. Calomel.

A New THEORY of

R. *Calomel.* gr. xv. ad 3j. *Conserv.* *Rosar.* q. s.
m. f. *Bol.* *bora somni sumend.*

R. *Man.* opt. diff. in *Aq.* *Epsom.* 3j. *s. m.* *Cap.*
craftina mane; *bibat ejusdem aquæ ad quan-*
titat. *libij.* *parum coct.* *cum paululo Nuc.*
Moschat. *incis.*

R. *Conserv.* *Rosar.* 3j. *Æthiop.* *Mineral.* 3s.
Camphor. 3j. *Sal.* *Volat.* *Armon.* 3s. *cum*
q. s. *Syr.* *Sambuc.* *m.* *Elect.* *Cap.* *Quantitat.*
Nuc. *Moscob.* *mane singulo,* *bora quarta po-*
merid. & *bora somni,* *superbib.* *lib.* *Apo-*
zem. *seq.*

R. *Lig.* *Sanct.* *Antimon.* *Crud.* in *nodulo ligat.*
a *lib.* *Saf.* 3ij. *Rub.* *Tinct.* 3j. *Rad.* *Glycir.*
3vj. *Qyinq.* *Radic.* *Aperient.* a 3s. *Coq.* in
Aq. *Font.* *libvj.* ad *libij.* *cui adde Spir.* *Nit.*
Dulc. 3ij. *m.*

R. *Galban.* *Col.* *Emplast.* *de Ran.* *cum Mercur.*
a *part.* *equal.* *misc.* *mass.* & *extend.* *super*
Alut. *Ovil.* *parti affect.* *applicandum.*

If his Stomach fail him, he may take the following Elixir in a Glass of generous Wine.

R. *Elixir.* *Vitriol.* 3ij. *Cap.* *gut.* xij. *in Hauft.*
Vini Alb. *Mont.* ter *quaterve in die.*

THESE Medicines and Applications, from Experience I speak it, have done very great and notable Service, in relieving schirrose Tumours in both Liver and Spleen; and, I believe, where there is any Hopes or Expectations of a Cure, they may be depended upon.

IN the mean time, the Patient must be very careful to intend his peculiar Manner of Diet, not forgetting Exercise, especially Riding, for I must prefer it to any we use in *England*, for it may be intended or remitted to what Pace or Degree we please, and the numberless Concussions in this Case successively coming upon each other, must

must greatly contribute towards the resolving the Obstructions.

If he find himself weary'd with his Riding, he may take some gentle Opiate; but this I must beg Leave to observe, that Opiates and all sleeping Medicines are least of all to be indulg'd in schirrose Tumours in either Liver or Spleen, or indeed in any Tumours seated in any Part of the Body.



C H A P. VIII.

Of the Cure of the Jaundice.



S the Cause of the Jaundice most commonly arises from a too viscid State of the Blood, from the Impulse of the Solids depreſ'd beneath their just Balance; so the Cure must result from those Medicines that by their stimulating Powers may raise their Contractions to their natural Standard; and that this is so, appears from all those Medicines remarkable for their Effects in the Cure of this Disease; even the *Sapo Venetus*, that seems to favour another Intention, might conclude for this Theory.

S Y L V I U S, indeed, applies it with another View, as if the Bile were over-active, and therefore wanted a Medicine consisting of oleose Particles, to sheath its over-great Volatility, and abate its Acrimony; but tho' the *Sapo Venetus*, by its oleose Particles, might seem to favour this Intention, yet its other Parts consisting of lixivious, alkaline Salts, whereby it greatly deterges and penetrates the minutest Passages, and, of Consequence, stimulates

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stimulates the Solids to redouble their Contractions, must fuse the Bile, and destroy its Viscidity, that was the Cause of the Obstruction, that gave Being to the Jaundice.

NOT that I deny, but that the over-exalted Motion of the Bile may be the Cause of this Disease; yet Reason might inform us, that the *Cholera Morbus* might sooner be suppos'd to be the Effect of such a Fusion, than the Jaundice.

BUT be that as it will, the Cure we generally perceive most happily to succeed, where it is attempted by Volatile Salts, and those Medicines that are endued with a truly Cordial Nature; this makes Saffron a Specific; and I have been inform'd of several Cases of the Jaundice, where the Disease has been absolutely cur'd with only a Lemon and a little Saffron beat up together, with a determin'd Quantity of Sugar, and taken every Night and Morning; and so visibly efficacious has it prov'd to several, that generally it is the first Medicine the good Women try, before they desire any farther Advice; and this Medicine we can conceive to operate no other Way, but as the Saffron raises the Spirits, whereby the Solids are better influenced to redouble their Contractions, and attenuate and divide the biliose Juice every where floating with the Blood, and of Consequence detach it off either by the cutaneous Discharges, or the renal Emunctories.

OUR Endeavours, therefore, in the Cure of the Jaundice, ought to be chiefly employ'd in opening the Obstructions of the *Porus Bilarius*, and procuring the Bile to descend into the Intestines, whereby the Disease will lessen, and the Colour defecating the Skin, continually go off by some of Nature's Outlets, till the Jaundice is perfectly cur'd.

THE properest Medicines to answer these Intentions are gentle Purgatives; both Bleeding and Vomiting are to be pretermitted in this Disease; or, if a Vomit be yielded to, it is only in some particular Cases, when the Disorders attending the Stomach rather than any Symptoms of the Jaundice, indicate this Operation necessary; for they encrease the Colour, which makes me shrewdly suspect they encrease the Disease.

To clear the first Passages, it will be proper to exhibit the following Draught, and repeat it as Occasion requires.

R. Tinct. Sacr. 3ij. Syr. de Rbab. cum Cicorio 3j. Ag. Cin. Fort. 3ij. m. f. Haust.

AND those Days he does not take the purging Potion, he may go on with the following Electuary and Infusion.

R. Rad. Curcum. 3j. Enul. Camp. Rad. Rhabdan. a 3ij. Croc. Martis 3j. Macis Nucis Mosch. Croc. Pulv. a 3j. Theriac. Com. 3iv. m. Elect. Cap. quantitat. Nucis Mosch. omni mane, hora quarta pomeridian. & hora somni, superbib. Coch. iv. Infus. sequent.

R. Rad. Rub. Tint. 3vj. Fol. Sen. 3ij. Rhei incis. 3j. Ras. Ebor. Corn. Cerv. a 3ij. Sem. Coriand. Cardamom. Rad. Gentian. a 3j. Sal. Tart. 3ij. Stent simul in Vin. Alb. Lisbonens. 1bjs. per horas xij. Col. cui adde Sp. Nit. Dulc. 3ij. m. f. Tinct. Cap. Coch. iv. pro Dosi.

R. Elix. Vitriol. Mynscint. 3ij. m. Cap. gutt. xvij. in haust. Vin. Alb. & Aq. Font. a part. equal. mane, hora quarta pomerid. & hora somni.

BUT if any incline to favour the Practice of the Castle, or Venice Soap, he may prescribe the following

following, which is supreme amongst the many *Formula's* I have met with.

R. Sapon. Venet. 3ʒ. Croc. Pulv. gr. xij. Sal. Vol. Viperar. gr. iiij. m. f. Bol. cum q. f. Syr. Balsam. Cap. sexta quaque hora, superbib. Haust. seq.

R. Sem. Cannab. ʒij. Contund. quam optime in mortar. marmor. sensim affundendo ibij. Aq. Spadiens. cui adde Sp. Nit. Dulc. 3ij. m. Cap. ibid. sexta quaque hora cum Bol.

I HAVE been told, that the *Sal. Vol. Viperar.* will cure the most desperate Jaundice; but I cannot vouch for its Efficacy, never daring to commit the whole Stress of the Cure to its Effects alone, for fear it should either not answer the Encomiums in Practice, or prove adulterated; for the genuine Salt, I believe, is not easy to meet with, most of those dear Medicines being scarce a tenth Part truly prepar'd.



C H A P. IX.

Of the Cure of the Asthma.



THE Asthma, of all other Diseases that arise in the Compass of the Breast, is attended with the most distracting Symptoms, and which frequently, by the Severity of its Paroxysms, brings the Patient into the most imminent Hazard. It will, therefore, be worth our Pains to be a little more exact in forming our Indications of Cure; and therefore we must distinguish between removing the Symptoms, and the Cure of the Disease.

THE first only intitles him to a transient Relief, if Care be not taken, at the same Time, to prevent their Return, they will assault him again and again, and by their frequent Invasions become inveterate ; so, that, in the latter Stages of this Disease, there is as much Trouble to relieve the Paroxysms, as, in the Beginning, there would be to remove the Disease, would the Patient but set heartily about it. But the Misfortune is, most People are averse to the Proceedings of the Physician, after they are made easy ; they never consider the After-Claps they are to suffer from the Circulation of the same Disease.

ALL periodical Diseases have their Returns ; the Stone, the Gout, and Intermittent Fevers, all plainly prove the Truth of this Assertion ; and the Fits of the Asthma, the Stone, and Gout, come and go more or less frequent, are more or less violent, and of longer or shorter Continuance, according as the Patient more or less indulges in the Use of the Non-naturals, *viz.* in his Manner of Eating, Drinking, Exercise and Sleeping.

BUT as the Paroxysms are always attended with the most pressing Danger, so we shall consider, in the first Place, the Methods most proper to rescue the Patient from the Burthen of their Tyranny.

IN the Cure of the Asthma, we must principally regard two Things : First, what is to be done in the Fit ; and, secondly, how to prevent its Return.

THE Cure of the Asthmatic Fit requires the following Intentions.

FIRST, to relieve the Straitness of the Bronchia, and Blood-Vessels.

SECONDLY, to remove that Load and Pressure of the Breast, that greatly obstructs Perspiration ;

tion; both which Intentions are greatly answer'd by Bleeding, especially if the Fits be extreme: for it mightily helps the Circulation of the Blood, encreases the Playing of the Lungs, empties the Fulness of the Vessels, by immediately subtracting from the Cause, and thereby assists the Contractions of the Vessels to overcome the Viscidities of the Fluids.

THEREFORE, if the Breathing be very short, let Blood be extracted from the Arm to the Quantity of eleven Ounces; but this Quantity must be vary'd according to the Strength of the Patient.

IMMEDIATELY after Bleeding, let a good large Blister be apply'd to the *Scapula's*, and two to the Arms, from which Applications I have known wonderful Succes; after which may be exhibited the following Vomit.

*R. Rad. Ipecacuan. 9ij. Oxymel. Scilitic. 3vj.
Aq. Card. Benedict. 3j. m. f. Haust. statim
sumend.*
To Be used if Vomits be judg'd improper, by reason of the Patient's Age, or some extraordinary Symptoms then present, let the following Purging Potion be prescrib'd.

*R. Tinct. Sacr. Elix. Salut. a 3j. Ol. Lin.
3vj. Syr. Rosar. 3vj. vel de Spin. Cervin.
3j. Sp. Salis Armon. gutt. xvij. m. f. Haust.
quamprimum sumend.*

ABOUT six Hours after, if the Symptoms abate not, let him go on with the following Prescription.

*Repetatur Venæsectio in Vena Jugulari, &
detrahantur Sanguinis 3x.
R. Gum. Ammoniac 3ij. fiat diff. in Aq. Pu-
leg. vel Hyssop. vel Aq. Cerasor. Nig. 3vj.
cui addit. Sp. Salis Armoniaci 9ij. m. Cap.
Coch. ij. urgente Dyspnœa. Vel,
R. Syr.*

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R. Syr. de Praesio, de Allio, a 3j. Aq. Puleg.
3j. Tinct. Croci, Vin. Canarino fact. 3vj.
Tinct. Castor. 3ij. Sp. Corn. Cerv. 3j. m. f.
Mixt. Cap. Coch. j. tertia quaque hora in
Agonibus.

This observe, that all the Medicines prescrib'd during the Fit, ought to be in liquid Forms, because they are sooner dissolv'd, and pass quicker into the Blood, whereby the Patient sooner feels their good Effects; and this farther mind, that if the Body be costive, laxative Clysters are to be frequently injected during the Severity of the Symptoms.

In a moist Asthma, attended with Cough and Inflammation, the following Method will be preferable.

Omit Vomiting and Purging both, and intend Bleeding as in a Pleurisy or Peripneumony, after which prescribe the following Formula.

R. Ol. Lin. 3j. Oxymel. Scilitici 3ij. Sal.
Prunel. 3j. Aq. Lact. Cin. Hord. a 3j. m.
f. Haust. sexta quaque hora sumendus.

R. Ol. Lin. 3ij. Syr. Alb. Papaver. Erratic. a
3j. Sacch. Alb. 3ij. Sperm. Cæti 3j. Croc.
Palv. 3j. m. f. Lind. Cap. Coch. j. frequenter,
superbib. Haust. Apozem. seq.

R. Decoet. Pectoral. Aq. Hord. a 3j. Syr. Vi-
olar. 3ij. Sal. Prunel. 3ij. Sal. Volat. Ol.
gutt. lx. m. Apozem. Bibat Haust. sèpius in
die parum calide.

WHEN the Fits begin to abate, and Respiration grows something freer, let the Patient take the following Prescription, to clear the Lungs of those Concretions and Viscidities, that obstruct the Bronchial Glands, and hinder the Freedom of Respiration.

Second

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R. Gum.

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R_o Gum. Ammoniac. Col. 3ij. Cast. Rus. Flor. Sulph. & 3j. Milleped. præp. Sal. Tart. & 3ij. Flor. Benzoin. 3ʒ. Sal. Vol. Succin. 3j. Bals. Peru gutt. xij. cum q. s. Syr. de Allio. m. f. Pillul. è 3j. N°. x. Cap. tres, quatuor, vel quinq. hora somni & primo mane, superbib. Coch. iv. Fulap. seq.

R_o Vin. Montan. 1bj. Sp. Sal. Armon. 3j. m. Fulap.

THE Patient during the Fits, especially the severer Paroxysms, ought to eat but little, and that very thin, as Barley-Broth, Ptisans, &c. and if the Fits continue violently to afflict him for two or three Days, he must continue the same Diet; for the thinner and smoother the Meats are, the easier will they digest, the sooner will the Vessels break all the Viscidities that spring from 'em, and, of Consequence, the quicker will the Fits go off.

THE Air must be kept cool, for that is best to open the Obstructions of the Lungs. All strait Cloaths, and the Weight of Blankets, hinder the Expansion of the Breast; and it is impossible to conceive, under such Oppressions, what Complaints the Patient will make under the lightest Covers, that do but touch the Breast; therefore let every thing be remov'd, that may cause the least Pressure upon his Breast, till after the Fit is over.

BUT it is not enough, that we recover the Patient, and free him from the Pressure of the Symptoms, but we must go farther, and endeavour to cure the Disease.

Now the Cure of the Disease consists chiefly, first, in being able to evacuate that Load of Phlegm, and viscid Lymph, that oppresses the Stomach, and greatly obstructs the Playing of the Lungs.

SECOND-

SECONDLY, In removing the Obstructions of the Bronchial Glands, and reducing 'em to a better Tone.

AND lastly, in strengthning and restoring the digestive Faculty of the Stomach, the Texture of the Bowels, and the general Frame of the whole Body ; all which Intentions we shall be able to confirm greatly to the Patient's Welfare, if he will be but regular and observing in the Use of those Means necessary for restoring his Constitution.

ALL those Medicines that evacuate the first Passages, whether they be Vomiting or Purging Medicines, come under the first Intention in the Cure of the Asthma ; and Vomits, in particular, are necessary, where the Constitution is able to bear 'em ; but if thro' Age, or any other Infirmity, Indications arise that render 'em unsafe, in such Cases we must avoid them : And, indeed, I cannot recommend their frequent Use in Diseases of the Breast and Lungs, unless to the Robust, and those of a hale Constitution ; for altho' they have done great Service in the Asthma, when they have been administred to Bodies that could bear their Operation ; yet if we consider the great Damages many Asthmatic People have receiv'd from their male Administration, we shall have no Reason to boast of their Use in this Disease : Many, from their frequent Repetition, that before were only Asthmatic, have become Consumptive ; and others that had it with Intermissions, have brought it to be perpetual. But when Vomits are truly necessary, I think half a Drachm of the *Ipecacuan*, or a Drachm of the *Sal. Vitriol.* or which, in some Cases I prefer to both the former, an Ounce and half of *Oxymel of Squills* is an excellent Vomit in any Disease of the Breast, where Vomits are necessary. But if this Kind of Medicines be reject-

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ed, then we must endeavour to answer this Inten-
tion by purgative Medicines,

R. *Tinct. Sacr.* ʒij. *Syr. de Spin.* Cerv. ʒ.
Aq. *Iberiac.* ʒij. m. f. *Hauſt.* mane ſumend.
Vel, *Perf.* *lindonoid editio* *to volunt* *avifinib*
R. *Tinct. Sacr.* *Elix.* *Salut.* à ʒj. *Syr. Rosar.*
ʒj. m. f. *Hauſt.* *Cap. mane,* & repet. pro
Re nata.

THUS far as to the firſt Intention; and if his Body encline to Costiveness, it will not be amifs, if every Night, excepting those Days he takes his Purging Medicines, he take an Ounce, or Ounce and half of *Tinctura Sacra*; for, above all things, if we expect to make a thorough Cure, we must endeavour to bring the Bowels to answer regularly by Stools; and, when that one Point is gain'd, we ſhall then easier proceed to execute the ſecond Intention, viz. to endeavour to remove the Obſtructions of the Bronchial Glands,

INDEED, this Intention is best effected by those Medicines that abound with Volatile Salts; and therefore, moft of those Medicines that were employ'd in relieving the Symptoms, will also demand a particular Conſideration in prosecuting this Part of the Cure,

R. *Oc. Canc. præp.* ʒij. *Antibeet.* *Poter.* *Sal.*
Tart. *Benzoin.* *Purif.* à ʒiv. *Bals.* *Peru* ʒj.
Croc. Pulv. ʒij. *Sal. Vol.* *Succ.* ʒj. cum q.s.
Syr. Balsam. m. *Pil.* è ʒj. N°. xij. *Cap.*
quinq̄ omni mane, ſuperbib. *Hauſt.* *Apo-*
zem. seq.

R. *Rad. Enul.* *Camp.* ʒ. *Fol. Heder.* *Terreſt.*
Manip. j. *Sem.* *Anis.* ʒij. *Coq.* in *Decocc.*
Pectoral. ʒij. ad ʒij. *Col.* cui addē *Syr. de*
quinq̄ Radic. *Oxymel.* *Scilitic.* à ʒj. m. f.
Apozem.

R. *Sal. Vol. Suc. Armoniac. Sal. Corn. Cerv.*
ā gr. vj. Sal. Vol. Ol. gutt. xvij. Vin. Alb.
vet Vin. Canarin. ȝij. m. Hauſt. singula
nocte ſumendus.

HAVING remov'd the Impediments of the first Passages, and clear'd the Bronchial Glands of those viscid Juices, which, obstructing, were frequently the Cause of the Paroxysms, the Order of my Discourse requires that I go on, and consider the last Intention, which calls for Medicines that may brace the whole Constitution of the Solids, and raise their Contractions to their just Standard, whereupon all the Juices are naturally secreted, the Action of the several Parts entirely restored, and, of Consequence, the Diseases they were ſubject to, absolutely cur'd.

R. *Chalyb. cum Sulph. præp. ȝj. Pulv. Rhei*
ȝjȝ. Spec. Diamb. fine Od. Croci Pulv.
Pulv. Ari Comp. ā ȝj. Bals. Peruvi. ȝij. Sal.
Chalyb. ȝj. cum q. f. Syr. de Praſio. m. Pillul.
exiguae. Cap. quatuor mane que nocte, ſu-
perbib. Coch. vj. Infus. seq.

R. *Marrub. Manip. j. Summ. Centaur. Minor.*
Flor. Chamaemel. ā Man. ȝ. Rad. Helen.
Rad. Gentian. ā ȝj. Sem. Sinap. ȝij. Infund.
in Aq. bullient. ȝbj. ad ȝxij. Col. cui addē
Aq. Limac. Magif. Aq. Lumbric. ā ȝij.
Spir. Nitr. Dulc. ȝjȝ. m. f. Infusio.

THE following Electuary and Infusion prevent-ed an habitual Winter's Asthma, that had troubl'd the Patient twelve Years.

R. *Eleēt. Saff. ȝjȝ. Cort. Peruvi. ȝvj. Pulv.*
de Gutt. ȝȝ. Rad. Zedoar. ȝij. Sal. Volat.
Armon. ȝj. cum q. f. Syr. Balsam. m. Eleēt.
Cap. Quantitat. Nuc. Mosch. ſexta quaque
hora ſuperbib. Coch. vj. Infus. seq.

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*R. Cort. Peruv. 3j. Rad. Serpentaria. Virg. 3ij.
Contund. crassiusculè, & affunde in Aq.
Font. 1biij. bulliant. ad 1bj. Col. cui adde
Aq. Pæon. Comp. 3vj. Sp. Lavend. Comp. 3fl.
m. Infuso.*

C H A P. X.

Of the Cure of the Dropfy.

E are now come to examine into the Cure of that most desperate of all Chronic Diseases, the Dropfy, and which requires an *Herculean Labour* to set Things to rights in Bodies labouring under any Degree of its Tyranny.

FR OM what I have deliver'd concerning the Nature and Cause of Chronic Diseases, especially those that attack the Constitution towards the latter Stages of Life, it will evidently appear, why they are so difficult to cure.

B E C A U S E the Contractions of the Solids are decay'd, because they can no longer maintain the regular Circulation of the Fluids, nor preserve 'em from running into preternatural Cohesions, that disturb, vitiate, and embarrass the several Organs, from whence arise all those Diseases they are subject to.

S O far, therefore, as we can restore the Contractile Powers of the Solids, so far we can remove the preternatural Cohesions, so far we can relieve the Parts, and, of Consequence, cure the Diseases that lodge upon their Organs, from an over-great Viscidity of the Fluids.

F R OM these Considerations it will appear, that all Chronic Diseases are more or less difficult to cure,

cure, as they have been of longer or shorter Standing, and as they are more or less rivetted to the Constitution; and I believe a Dropfy and other inveterate Chronic Diseases incurable, upon no other Grounds, but as the Solids, under such Circumstances, are so vitiated, as not restorable by any Methods to their pristine Vigour; for of this I am certain, that in all Cases where the Action of the Solids can be restor'd, there the Diseases of those Parts may most certainly be cur'd.

IN accounting for the Nature and Cause of the Dropfy, we have taken Notice of two Kinds, the *Ascites* and *Tympany*; the former, whose Cure I shall first dispatch, most commonly appears first in the Ancles, which by Degrees swells into the Habit, and enlarges the Legs and *Abdomen* to an almost incredible Bigness.

THIS Kind of Dropfy may easily be cur'd in the Beginning; and sometimes we have known great Relief given in the extremest Cases, where the Bowels were found.

THE Cure is to be attempted by those Medicines that, in the first Place, evacuate the Waters; and, secondly, by those that restore the Solids, and brace their Constitution, whereby the Fluids may maintain their Circulation in every Part; and these two Intentions may very easily be effected, if the Patient will but be indefatigable in his Rules of Diet and Medicine.

INDEED, it demands the bravest Resolutions of the Patient, to encounter the almost insuperable Difficulties that attend the Cure of this Disease; for whereas an intense Thirst is an inseparable Symptom, by which means the Stomach is continually excited to crave Liquors, that are directly contrary to the Disease; in this Case, the

more

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more he drinks, the more he will encrease the stagnant Juices, and of Consequence the Dropsy.

Now one would think, that the Horror of Death, which is inevitable upon such Indulgence, should have Power enough to oblige him to baulk Appetite under such pressing Circumstances; for the whole Stress of the Cure will in a great measure depend upon his abstaining as much as possible from Liquids.

LET his Diet therefore be drying, roast rather than boil'd; his Bread Biscuit, and his Drink the most generous Wines.

THE first Intention calls for Medicines that may remove that Load, that oppresses Nature; and this will best be done, by substracting from the Matter; and by Experience we find, that nothing answers this Intention so well as strong Purgatives: From the Administration of the following, I have known happy Effects.

*B. Colocynth. Gut. Gambog. a 3vj. Sal. Tart.
3j. Ol. Chamæmel. Origan. a 3j. cum q.
f. Syr. de Spin. Cerv. m. Mass.*

*B. Hujus Massæ 3j. Calomel. 3j. m. f. Pillul.
Nº. 5. dosi, mane sumendus.*

THIS Quantity I have ventur'd to give to very corpulent Bodies, and never, as I know of, unhappily. If the Spirits flag during the Operation from the Excels of the Evacuations, I generally prescribe the following Draught.

*Aq. Vitæ 3ij. Syr. Papav. Errat. 3j. Sal.
Vol. Ol. gutt. xx. m. f. Haust. quamprimum
sumendus, & repet. pro re nata.*

THOSE who are of a weakly Constitution, and cannot bear such strong Medicines, may take the following.

*B. Tinct. Sacr. dupl. Quantitat. Spec. Hier.
Picra, 3ij. Elect. Cariocost. dis. 3j. Pulv.
Jalap. 3j. m. f. Haust.* Hc

HE may go on with the following, those Days he does not take the Purging Medicines.

R_o. Aq. Vitæ tbj. Sal. Tart. ȝij. m. Exactissime cap. ȝjȝ. omni mane & hora somni.

THIS Medicine mightily helps the Contraction of the Solids, to resolve the Viscidities of the Juices, and pass off their superfluous Load by Urine. *Vel,*

R_o. Vin. Mont. tbj. Cin. Genist. subtiliss. pulv. ȝiv. Nuc. Mosch. ȝȝ. m. Cap. Coch. vj. omni mane quarta pomerid. & hora somni, agitando prius Pbialam.

AFTER we have thus far proceeded, and given the Disease a thorough Check, we may go on to compleat the Cure with the following Administration.

R_o. Pulv. Peru ȝj. Aq. Vitæ ȝiiȝ. m. f. Haust. Cap. octava quaque hora, agitando prius Pbialam.

AND these are the Methods I have always us'd in the Beginning and Progress of this Disease, when it only came under the Denomination of the *Ascites*.

BUT, not so must we relieve the Tympany; for the stronger Purges, in this Case, will sooner encrease than abate the Disease: The following Method, therefore, I should prefer, as better suited to the Exigence of this Disease, when Wind is complicated with Water; for Wind is of that subtle Nature, that unless it fall into the Guts, and oppose the Medicine, it is not to be purg'd off, but will avoid the Operation of the most exquisite Purge: Therefore, to relax the *Abdomen*, which, in some Cases, is as greatly distended as a blown Bladder, we must have Recourse to those Medicines that will relax the Body, render the Intestines soluble, and at the same Time disperse Wind.

R_o. Elixir.

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R. Elixir. Salut. Ol. Lin. à ʒjß. Syr. Rosar. Dam. 3vj. Sp. Nit. Dulc. ʒß. m. f. Haust. mane sumendus, & repet. pro re nata.

Applic. teto Abdomini Emplast. de Cimin. imbut. cum Ol. Chamæmel. Chym. extract. quam primum.

B. Summitat. Abroton. 3vj. Flor. Chamæmel. ʒß. Rad. Galangal. Calami Aromat. Rad. Zedoar. Gentian. à ʒj. Contufis & incis. Infund. in Brand. Vin. ʒbjß. cui adde Sal. Tart. 3vj. Sp. Nit. Dulc. ʒß. m. Cap. ʒjß. omni mane, quarta pomerid. & hora somni, cum Quantitat. Nuc. Moscbat. Elect. seq.

R. Conserv. Flavid. Aurant. ʒj. Anthos 3vj. Nucb. Moscb. Cond. Cort. Cit. Cond. Zin- ziber. à ʒß. Pulv. Ari 3jj. Zedoar. ʒij. Chalyb. simp. præp. ʒjß. Spec. Diamb. fine Od. ʒj. cum q. s. Syr. è Cort. Citr. m. Elect. Cap. Quantitat. Nuc. Moscb. pro Dosi.

THE Anasarca is a Dropsical Disposition, arising from a Weakness of the Solids, unable to give the Fluids that Vigour necessary for a free Circulation; whereupon the crass, dispirited Serum settles in the Legs, and every where outwardly upon the Habit: For, as we observ'd before *, the Serum being the lightest Parts of the Blood, will be forc'd against the Sides of the Vessels, and require a greater Force to continue it in Motion, while the red Globules keeping to the Axis of the Artery, will preserve their Motion entire; and, of Consequence, the Serum being the most viscid, will precipitate first.

* vid. pag. 48.

BUT as this Dropfical Disposition is the easiest to cure, so I shall spend no Time in giving a Set of Directions; for all those Medicines we have prescrib'd in the Cure of the Scurvey, will greatly help in relieving this Infirmitiy.

C H A P. XI.

Of the Cure of Complicated Diseases.



COMPLEX Diseases are those that attend our Bodies in the latter Stages of Life, and argue the highest Perversion of the Solids and Fluids they almost can arrive at, without putting a Stop to the vital Actions of human Nature; and it must easily appear, what little Hopes or Expectations can be given of curing Diseases that invade the Body when its Powers are least capable of making Resistance to their Tyranny, when they invade us thro' an Impotency in Nature, and the Organs flag thro' a Failure in the Contractile Powers of the Solids.

BUT before we shall be able to prosecute the Cure of Diseases, where two different Diseases are existing in the Body at the same Time, which will be in all complicated Cases, we must, in the first place, endeavour to get a right Knowledge of that Disease which is most dangerous; and that will easily be known, when we have examin'd into the particular Seats of the Diseases.

NOW all Diseases are more or less dangerous, as the Organs wherein they are seated more or less correspond with Life. This proves, that the

Stone

A New THEORY of

Stone is of more dangerous Consequence than the Gout, because the former is seated nearer the Center of Motion, and upon Bowels the most exquisite in Sensation ; this proves also, that Acute Diseases are more dangerous than Chronic, because the former often destroys the Patient in a few Hours.

WHEN we come to encounter the Cure of Complicated Diseases, which are only Chronic Diseases grown inveterate by Time and evil Customs, we undertake an *Herculean Labour*, and a Task next to Impossibility ; but however, the Ways and Means must be variously chang'd, as different Combinations of Symptoms shall arise, and as the Part or Parts they possess more or less suffer from their Pressure.

IN the first Place, and before all other Intentions, we must take great Care that the Non-naturals be well adapted, and that the Meats chosen for Food, be those that are of the lightest Digestion. If the Patient has been accustom'd to a full Feeding, he must abridge his Appetite ; however, some Indulgence must be yielded to Age. Indeed, if the Complication happen to one of younger Years (which might seem preposterous, did not Experience confirm it too frequent) we may there use more Freedom in balking Appetite, both as to the Nature and Quantity of Food ; which cannot so well be taken with those advanc'd in Years, where, by Length of Time, those Customs are become habitual.

HAVING determin'd his Diet, both as to its Nature and Quantity, the next Point that comes under Consideration is, the Quality of the Air : And under the Circumstances of Complex Diseases, I should prefer a clear, fine, soft Air ; his Habitation upon a Ground rather rising ; where let

let him exercise himself with gentle Riding, or any other Exercise that may best suit his Constitution.

NEVER let him lie in Bed above six or eight Hours: no matter whether he sleeps or not; if he takes none the first Night, his Slumbers may be more compos'd the following.

THINGS thus dispos'd, let us consider the Dispositions of the Patient. If the Asthma be complicated with the Dropsy, and a Paroxysm invade the Patient, in this Case he is under the greatest Distress; for Bleeding, which is the most proper Means to relieve the Asthma, is of pernicious Consequence in respect of the Dropsy; but however, Recourse must be had to Cupping-Glasses; and Blood, extracted by their Application to the Scapula's, has produc'd as happy Effects, as if it had been drawn from the Arm, and with less Danger to the Dropsy.

THAT Operation over, let a good large Blister be apply'd to the Neck, and two to the Arms, after which he may go on with the following Medicines, which will both relieve the Asthma, and evacuate the Load of Waters from the Abdomen.

R. Gumm. Ammoniac. 3j. *Affæ Fætidæ* 3j.
Fæc. Bryon. 3*fl.* *diff.* in *Aq. Puleg.* *flss.*
cui adde Sal. Vol. Armon. 3*j. m.* *Cap. Coch.*
j. vel ij. urgente Agon.

IF the Solids are very effete and languid, which may be known by the Weakness of the Pulse, and other concurring Symptoms, that, at such Times, crowd in upon the Patient, it will be dangerous to attempt any rough Means; or else I knew a Gentleman that receiv'd the greatest Relief, by having his Legs laid open by Incisions made above an Inch deep, from which the Waters drain'd in great

great Quantities ; and by this Means he actually recover'd, and had, I believe, been alive to this Day, if he had not return'd to his old Customs, and brought on a Relapse, of which he dy'd.

No strong Vomits, nor purging Medicines, can safely be given in complicated Cases, without manifest Danger ; and therefore, if the Body be costive, gentle, laxative Clysters, and the milder Catharticks, must be insisted upon, and their Doses repeated ; and the Remainder of the Cure must be conducted by *Sal Volatile's*, and those Medicines that may give a *Stimulus* to the Solids : To answer all which Intentions, nothing can be better than the following.

R. *Tinct. Sacr. Elix. Salut.* a $\frac{1}{2}$ j. *Syrup. de Rosarum Solut.* $\frac{1}{2}$ j. *Aq. Epidemic.* $\frac{1}{2}$ j. *Sal. Vol. Ol. gutt.* xxv. *m. f. Hauſt. summo mane sumendus, & repet. pro re nata.*

R. *Conserv. Coch. recenter collect.* $\frac{1}{2}$ j. *Pulv. Ari Comp.* 3vj. *Sal. Vol. Armon.* $\frac{1}{2}$ j. *Syr. Paeon. Comp. q. s. m. f. Elect. Cap. Quantitat. Nuc. Moſch. omni mane, quarta post meridian. & hora ſomni, ſuperbib. Coch. vj. Infus. seq.*

R. *Cortic. interior Sambuc. Manip. j. Flor. Chamæmel. Pug. ij. Sem. Petrofil. Vulgar. Fænic. Vulgar. a 3vj. Sem. Sinap. $\frac{1}{2}$ j. fiat Infus. in Aq. bullient. $\frac{1}{2}$ j. Col. & cui addc Aq. Raphan. Comp. $\frac{1}{2}$ vj. Sp. Corn. Cerv. $\frac{1}{2}$ j. m. Infus.*

R. *Tinct. Antiaſthmatic. in fine bujus libri preſcript. $\frac{1}{2}$ j. Sp. Sal. Vol. Arm. $\frac{1}{2}$ ij. m. Cap. gutt. xl. in Hauſt. Vin. Alb. parum dilut. cum Aq. Font. ſepius in die.*

AND if, from the foregoing Administrations, there ensue any Hopes of Recovery, let the Patient be exhorted, as he values his Life and Welfare,

to

to intend the Course of the Non-naturals, and the regular taking of his Medicines, which, for fear of too much palling his Appetite, must be frequently varied.

AND thus far I have thought necessary to take Notice of the Cure of Complicated Diseases, this being the only Complication that will admit of any Probability of Cure; all the rest we shall range under the Title of incurable Diseases palliated.

C H A P. XII.

Of the Palliation of incurable Diseases.



HEN the foregoing complicated Diseases arrive to that Height, as not to yield to the Administration of the best Remedies, they then may be said to be incurable; that is, when by Length of Time, and evil Customs, they are riveted to the Constitution, and as it were become a Part of ourselves.

THE best the Physician can do in such Cases, is to palliate the Symptoms, and endeavour to give the Patient as much Ease and Relief under those deplorable Circumstances, as the Nature of his Case will admit.

NOR is it any Reflection to the Profession, that sometimes a Disease may happen not only to elude the Advice of the most able Physician, but also the Force of the most generous Medicines; no Man on Earth, let him be never so successful, can warrant the Cure of all Diseases; and the noble Art of Physick does not oblige to Impossibilities.

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lities. Could any Physician cure the Diseases of all Sexes, Times, and Ages, he must then have the Power of Creation, which is a Character too arrogant to contend for, and would be the highest Affront upon the High and Mightiness of Heaven, and little less than bordering upon Blasphemy.

IT is true, in my Treatise of the Stone and Gravel, I have there asserted, " That I do believe " that all Diseases are curable, and that only our " Ignorance of the Causes make some more difficult to cure than others ; but that if we could " penetrate into the hidden Causes of the most " complex Maladies, we should find them as easy " to handle, as those that lie more obvious to our " View.

NOW, upon reconsidering that Matter, I find myself under a very evident Mistake ; for we cannot cure Complex Diseases, because they are in their own Nature incurable, and because the vital Powers of the Solids are so entirely destroy'd, or at least impair'd, as not to be render'd capable, from the most generous Medicines, of rightly influencing the Fluids. And therefore, under such deplorable Circumstances, we must terminate our Endeavours to palliate their Disorders, by Medicines that may buoy up Nature under the Conflict of the Symptoms.

IN these Cases, all Medicines that excite a violent and harsh Operation are to be laid aside ; upon which Account Vomits are forbidden, as also the stronger Purges ; and nothing must be permitted the Patient, but the mildest, softening Medicines ; and if it be necessary to make an Effort upon the Bowels by opening Medicines, it must be done with all the Gentleness imaginable ; for this Purpose, Clysters of Milk and Sugar, with a little Oil, are most proper to relax the Intestines,

testines, and soften the Excrements; after which we may venture to prescribe gentle Purgatives of Rhubarb, Cassia, and Manna, always remembering to advise an Opiate, that may appease any slight Disorders that may happen upon their Operation.

R. *Confect. Rawleighbanæ* ʒj. *Confect. Alkermis* fine Od. ʒʒ. *Ol. Cin. gutt. j. Extract. Thebaic. gr. j. m. f. Bol. Cap. hora somni, superbib. Coch. iiij. Julap. sequent.*

R. *Aq. Ceras. Nig. Aq. Cinam. Hord. a ʒiiij.*
Aq. Pæon. Comp. ʒijʒ. Marg. præp. ʒj.
Sp. Nit. Dulc. ʒj. m. f. Julap. Cap. Coch.
ij. vel iiij. dosi, cum Bol. & in Languor. sexta
quaque hora. Vel,

R. *Elect. Rawleighan. ʒjʒ. Confect. Alkerm.*
ʒʒ. Marg. præp. ʒiiij. Pulv. Cin. ʒij. Laud.
Liquid. gutt. xl. Syr. Garioph. q. s. m. Elect.
Cap. Quantitat. Nuc. Moschat. omni mane,
quarta pomeridian. & hora somni, superbib.
Coch. iiij. Julap. Perlat. præscript.

R. *Syr. Papaver. Erratic. Ol. Amygd. Dulc.*
a ʒij. Ol. Sulph. per Camp. gutt. x. Sacch.
Alb. Cond. ʒij. m. f. Linct. Cap. Coch. ij.
sæpius in die.

O R. if the Body encline to be costive,

R. *Ol. Amygd. Dulc. ʒijʒ. Syr. è Flor. Perfitor.*
vel Violar. vel Ros. Solut. ʒijʒ. Sacc. Cand.
Albiss. ʒiiij. m. f. Linct.

R. *Aq. Cin. Hord. ʒjʒ. Aq. Citrin. ʒʒ. Syr.*
è Mecon. ʒj. Laud. Liquid. gutt. xv. m. f.
Hauſt. Cap. hora somni sæviente dolore.

THESE are the most general Medicines I can think proper to form for the Palliation of incurable Diseases.

INDEED, in these latter Stages of Life, wherein Diseases are highly exasperated from the minutest Causes, as especially happens under an incur-

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rable Diathesis of the Stone, when the Patient can find no Ease, take no Rest, but is Night and Day in continual Torture; under such Circumstances he cannot long expect to survive his Dolours; for grievous, acute Pains, and continual, cannot long be supported, but by daily wasting of the Strength, and breaking of the Constitution, which, sooner or later, will put an End to his wretched Life and Distemper together.

BUT I dare not absolutely determine the Time when Diseases become incurable. In some Cases we may certainly fix the fatal *Epocha*, beyond which there is no Redemption.

A PHthisis is incurable, when it breaks into an Ulcer; for, let some Physicians pretend what they please, I can never believe, that a confirm'd Phthisis, attended with an Ulcer of the Lungs, can be perfectly cur'd; and the Grounds upon which I found my Reasonings are,

FIRST, because those Parts that, from the Nature of their Office, are oblig'd to be in continual Motion almost every Second of Time, have no Time to rest towards a successful Cure, which is absolutely necessary, where we would bring the Lips of a Wound to unite.

SECONDLY, because the very Substance of the Lungs, being of a spongeous Nature, and vascular, are most difficultly dispos'd to heal.

AND lastly, because in all Cases of Wastes and Decays, the Medicines most fitly adapted to answer the End of Cure, are those that raise the Contractions of the Solids, and encrease all the Secretions, which are Enemies to the Ulcer, and exasperate the Cough, Fever, and other Symptoms.

THE Stone is incurable by Medicine, when, in old Age, it arrives to a considerable Bigness, and is compactedly knit together: So is the Gout,

when it arrives at those fatal Stages, wherein it forms those hard Nodes about the Fingers and Toes, and becomes irregular. And the Dropsy is incurable, when it is inveterate, and proceeds from a Rupture of the Lympheducts: In this Case I knew a Gentleman, that suffer'd the *Paracentesis* eleven times without any Benefit, more than a present Relief.

AND the Jaundice is incurable, when it arises from indurated, schirrose Tumours, obstructing the Liver or Spleen, which never fails to put on a Sable Hue, that sooner or later destroys the Patient.

THUS far I have consider'd the Nature, Cause, and Cure of most Diseases incident to human Bodies; and it evidently appears, from the Reasonings upon the foregoing Theory, that, so long as we can restore the Solids to their pristine Vigour, so long we can absolutely cure the Diseases arising from their perverted Action; but once their Tone and Spring are entirely destroy'd, there remains no farther Relief to be given, but that the Patient prepare to change this miserable State for that which is more lasting and durable.





A N

APPENDIX O F

*Some Choice Medicines, referr'd to in
the Cure of the foregoing Diseases.*

JULAP. REGIUM AURAT.

R. *C*inamom. *Irid. Flor.* a 3ij. *Suc. Cherm.* 3*fl*.
Cochinel. 3*j.* *Sp. Vin. Gallic.* 1*bij.* *Aq.*
Flor. Aurant. 1*bij.* *Fol. Auri* No. vj. *Sacc. Albif.*
3*fl*. *Sp. Nitr. Dulc.* 3*j.* *Stent simul per dies* iij.
postea col.

THIS is certainly a most noble Cordial; it succours all manner of Fluxes, where, from the Greatness of the Evacuation, they are apt to distress the Strength, and impress a Languor upon the Spirits: It causes a cheerful Disposition, and, in the fore-said most desperate Cases, I have known it to relieve, when all other Means have been us'd in vain.

P U L V,

PULV. BEZOARDIC. COMP.

Rx *C*oral. Rub. præp. Oc. Canc. præp. Succin.
Alb. Cran. human. leviter calcinat. à 3ij.
Pulv. è Carne Viperar. 3ß. Marg. Orient.
præp. ad pondus omnium. Omnibus rite præp. ut
fiant Globuli, cum Galatena è Spoliis Viperarum,
foliis Auri obruendi, atque cautè ficcandi.

THIS is a most powerful Remedy in all Fevers, especially the Malignant, and which I have constantly prescrib'd instead of the Gascoigne Powder, having some Reason to believe, that that Medicine is not always to be met with faithfully prepar'd, now, that Bezoar is so excessively dear.

IT raises the Spirits, restores the Contraction of the Solids, and revives the Strength under the most dejecting Circumstances.

CROCUS MARTIS.

Rx *L*imat. Chalyb. 1½j. *Aq. Font. 1½ß. Sal.*
Com. Armoniac. 3iv. Dissolve Sal. in Aq.
cui adde Chalyb. Stent simul donec in Massam arti-
dam ineunt, quæ à colore flavo dicetur Crocus.

THIS is the most excellent Preparation of Steel I have met with, and, in all Obstructions, is a singular Medicine.

OR

APPENDIX.

OR it may be prepar'd after the following
Manner.

R. *C*halyb. ℥vj. Urine sani pueri ℥vj. m. Stent in
leni calore, donec Consistentiam Massæ aridae
nactus erint; postea repete opus ter quaterve tem-
poribus, Et tandem Massa arida facta, repone usui.

TINCTURA ANTIASTHMATIC.

R. *G*ummi. Benzoin. puriss. pulveriz. ʒij. Gum.
Styrac. Calamit. ʒij. Aloes Succ. Myrra.
Bals. Peruv. 2 ʒij. Sal. Tart. ʒij. Sp. Vin. opt.
Rectifitat. ℥vj. Stent simul leni calore per dies
iiij. postea coletur.

This is a most noble Tincture; twenty or
thirty Drops in a Glass of Wine, or some gene-
rous Cordial, gives present Relief in old Coughs,
in Cholic Pains, and particularly in the Asthmatic
Fit, for which it is principally intended.

CROCUS MARITIMI.

FINIS






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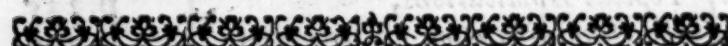
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